

THE DEPRESSOGENIC ATTRIBUTIONAL STYLE: ITS DIFFERENTIAL
APPLICATION TO SELF, STRANGERS, AND CLOSE OTHERS

BY

RODOLFO MURPHY

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TABLE OF CONTENTS

	<u>page</u>
ACKNOWLEDGEMENTS.....	ii
ABSTRACT.....	v
INTRODUCTION.....	1
Pessimism as a Risk Factor in Depression.....	1
The Validity and Reliability of the Attributional Style.....	4
Do the Attributions of Depressives and Nondepressives Differ?.....	6
The Use of Causal Cues.....	15
Pessimism for Self Versus Others.....	20
Summary and Hypotheses.....	24
METHOD.....	27
Subjects.....	27
Materials and Procedure.....	27
RESULTS.....	32
Perceptions of Covariation.....	32
Consensus.....	32
Distinctiveness.....	34
Consistency.....	36
Ratings of the Usefulness of Covariation Information.....	38
Consensus.....	40
Distinctiveness.....	40
Consistency.....	40
Internal Consistency of the ASQ.....	40
Attributional Biases.....	41
Comparisons Between Self and Others.....	43
Estimates About the Future.....	46
Ratings of Quality of Relationships.....	48
Quality of Relationships and Biases.....	50
Causal Cues and Attributions.....	52
Note.....	62

DISCUSSION.....	63
Self versus Other.....	67
The Use of Causal Cues.....	72
CONCLUSIONS.....	77
APPENDIX A	
CES-DC.....	82
APPENDIX B	
HYPOTHETICAL EVENTS OF THE ASQ.....	83
APPENDIX C	
RELATIONSHIP QUESTIONNAIRE.....	84
APPENDIX D	
ATTRIBUTIONAL STYLE QUESTIONNAIRE.....	89
APPENDIX E	
ESTIMATES OF OTHERS' SUCCESSES AND FAILURES.....	91
REFERENCES.....	92
BIOGRAPHICAL SKETCH.....	100

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By

Rodolfo Murphy

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Chairman: Barry R. Schlenker, Ph.D.
Major Department: Psychology

This study examined differences between depressives and nondepressives in the manifestation of optimistic biases for self, strangers and close others. Subjects completed a modified version of the Attributional Style Questionnaire which requires them to provide causal explanations for six positive and six negative hypothetical events, and rate each explanation along internality, stability, and globality dimensions. In this modified version subjects also provided estimates for the three covariation criteria identified by attribution theory. Finally, subjects completed the Relationship Quality Questionnaire using parent or roommate as target of evaluation.

Contrary to the cognitive models of depression, both depressives and nondepressives exhibited optimistic biases. These biases, however, were more pronounced among nondepressives. Depressives exhibited a positive

attributional bias when evaluating the self, close others, or strangers.

Nondepressives, on the other hand, exhibited a positive attributional bias only when evaluating self or strangers.

No differences were found between depressives and nondepressives in their ratings of the quality of their relationship with parent or roommate. In addition, the pattern of correlations between estimates of covariation and ratings of attributional dimensions did not replicate those found by previous research, and were generally inconsistent with attribution theory. Also, these correlations varied with different targets of evaluation and event types (positive versus negative). Implications for the cognitive models of depression are discussed.

INTRODUCTION

Pessimism as a Risk Factor in Depression

Many people at some point in their lives have experienced an episode of depression. Although in most cases depression is limited to a temporary episode of mild dysphoria, estimates indicate that in a particular year up to 15% of adults may suffer from clinically significant depressive symptoms (Sarason & Sarason, 1980). For this reason depression has received intense attention in the psychological literature (see Alloy, 1988).

One dominant approach for understanding and treating depression is the cognitive model. This model, introduced by Beck (1967), has emphasized the role of irrational or distorted thinking in the etiology of the disorder. Beck distinguished between the descriptive features and the cause of depression. The descriptive features consist of a cognitive triad involving negative views of the self, the world, and the future. The cause of this cognitive triad is the operation of a depressonogenic self-schemata.

A second cognitive model constitutes Martin Seligman's reformulated learned helplessness model (Abramson, Teasdale & Seligman, 1978). Seligman's early research had shown, to the dismay of learning theorists, that laboratory animals could learn in the absence of traditional rewards or punishment. In particular, when actions were futile, that is, when no matter

what the animal did painful shock could not be avoided, animals became passive and failed to initiate action. This state of helplessness, was defined as a condition in which nothing a subject does affects what happens to him/her. As a laboratory model of depression, however, learned helplessness soon proved inadequate in predicting depressive symptoms among humans exposed to the similar noncontingent consequences to which laboratory animals had been exposed. Seligman observed that some subjects would not become helpless no matter what happened to them or how many times they received failure feedback from the experimenter. This led Seligman and his colleagues to search for personality differences which might mediate effects of exposure to noncontingent negative consequences among humans. Abramson, Teasdale, and Seligman (1978) subsequently proposed that what determines if an individual will become helpless following repeated failure is his/her characteristic way of explaining outcomes. This "attributional style" was, thus, proposed as the personality characteristic which determines who becomes helpless in response to repeated failure.

Seligman's approach, now referred to as the hopelessness theory of depression (see Abramson, Alloy, & Metalsky, 1988), proposes that when an individual experiences a negative event, a depressonogenic attributional style may become activated resulting in the generation of causal attributions. These attributions can vary along three dimensions: Internality/specificity,

stability/instability, globality/specificity. When negative events occur, causal attributions that are internal, stable, and global result in expectations of future uncontrollability (hopelessness). A tendency to make internal, stable, and global attributions for negative, but not positive, events constitutes the depressonogenic attributional style. This pessimistic attributional style is viewed as a distal contributory (neither necessary nor sufficient) cause of depression. Thus, the presence of a depressonogenic attributional style increases the probability that the individual will experience depression if confronted with negative events, although the presence of a negative attributional style alone would not produce depression. In addition, people can get depressed even if they do not possess a negative attributional style. In Beck's (1967) model, maladaptive cognitive schemata constitute distal contributory cause of depression. Thus, both Beck's and Seligman's approaches to depression can be conceptualized as cognitive diathesis-stress theories (Alloy, Hartlage & Abramson, 1988), where particular cognitive styles (the diathesis) are hypothesized to make individuals, who are confronted with negative life experiences (the stress), vulnerable to depression.

One of the goals of this study is to examine the extent to which this depressive pessimism is confined to self or if it extends to others. Beck (1967), for example, argued that depressives' inferences are characterized by "biases against the self." However, Abramson, Teasdale, and Seligman

(1978) distinguished between personal and universal helplessness. Personal helplessness refers to the condition where a subject expects outcomes to be contingent on the responses of relevant others but not contingent on any response in his/her repertoire. Universal helplessness refers to the condition where the subject expects outcomes not to be contingent on the response of any relevant other people or on any response in his/her own repertoire. Abramson et al. (1978) suggest that personally helpless individuals will show lower self-esteem than universally helpless individuals, although both will show the cognitive and motivational deficits associated with depression. Are depressives equally pessimistic about the outcomes of others as they might be about their own outcomes? I will examine these potential differences in pessimism between depressives and nondepressives in terms of their attributions for positive and negative events, their expectations about the future, and their judgments about the extent to which others experience as many successes and failures as they do.

The Validity and Reliability of the Attributional Style

The attributional style has been defined as a tendency to make particular kinds of attributions across situations and over time. However, the hypothesized existence of a trait-like attributional style has generated controversy. Major objections to an attributional analysis of helplessness emphasized the lack of experimental evidence supporting the notion that people spontaneously make causal attributions after success or failure, and

observed discrepancies between attributions and overt behavior (Wortman & Dinzer, 1978). Although research has subsequently found that people do spontaneously make causal attributions after failure and expectancy disconfirmation (Wong & Weiner, 1981), other research has questioned the validity and cross-situational consistency of the attributional style as originally formulated. For example, scores on the Attributional Style Questionnaire (ASQ; Peterson, Semmel, vonBayer, Abramson, Metalsky, & Seligman, 1982) appear to be poor predictors of causal attributions for actual negative events (Cutrona, Russell & Jones, 1985). In addition, Cutrona et al. (1985) found modest cross-situational consistency for subject's causal attributions on the ASQ. However, in response to this latter finding, Anderson, Jennings & Arnoult (1988) have argued that the most effective approach to the measurement of individual constructs constitutes their measurement at moderate levels of specificity. For example, an adequate level of specificity for the attributional style would explain consistency in causal reasoning only across situations with similar psychological meaning to the individual (e.g. interpersonal failures versus achievement failures). This suggests that subjects with a negative interpersonal attributional style would be at risk for depression if they encounter repeated negative events in the interpersonal domain, although they would not be at risk for depression if their negative experiences are in the achievement domain.

The ASQ has been used repeatedly both as independent and dependent measures in depression research (see Peterson & Seligman, 1984; Seligman, 1990). It has also been revised and expanded in an attempt to improve the internal consistency of the attributional dimensions (Peterson & Villanova, 1988). In the current study however, I used the original version of the ASQ as a dependent measure. Contrary to the Peterson ASQ revision, which contains only negative events, the original ASQ contains both positive and negative events. This allowed the calculation of an attributional bias score-- differences in attributions for positive and negative events-- and obtained a more direct measure of pessimism. That is, an individual who is pessimistic should expect the causes of negative events, but not positive events, to last a long time, affect everything he/she does, and be his/her fault.

Do the Attributions of Depressives and Nondepressives Differ?

At the core of the hopelessness theory of depression is the proposition that depressives possess an attributional style characterized by a tendency to generate internal, stable and global causes for negative events. However, some research has failed to find differences between depressives and nondepressives in their attributions for negative events.

Hammen and Cochran (1981), for example, failed to find attributional differences between depressive and nondepressive college students who had experienced recent stressful events. Depressives showed greater uncertainty about events and greater expectancies of future negative events however,

they did not differ from nondepressives in the kinds of attributions they made. Hammen and de Mayo (1982) found that depressive symptomatology among high school teachers correlated with cognitions pertaining to coping abilities but not with internal or stable causal attributions.

In an experimental manipulation of beliefs about causality for an uncontrollable task, Pasahow (1980) found that subjects who were led to believe that their poor performance on a training task would predict performance on most other psychological tasks (high globality) performed worst on a subsequent anagram test than subjects who believed their performance on the training task would be predictive of future performance on a narrow range of tasks (high specificity). However, when subjects were also asked to generate attributions for their performance on the training task, their particular attributions did not mediate anagram performance.

Zuroff (1981) found that depressives made more internal attributions for failure at an experimental task. However, in absolute terms, depressives preferred external over internal attributions for failure. However, Tennen and Herzberger (1987) failed to find a correlation between depression and the strength of the self-serving attributional bias. Instead, the results indicated that self-esteem was the best predictor of the absence of the self-serving bias.

Several studies have examined differences between depressives and nondepressives on hypothetical events. McMahon, Bradley and Davidson

(1982) did not find significant correlations between ASQ scores and depression among a sample of pregnant women. Lewinson, Steinnetz, Larson, and Franklin (1981) found that none of the dimensions of the Multidimensional Multi-attributational Causality Scale discriminated between depressives and nondepressives. And, Blaney, Behar and Head (1980) found much lower correlations between negative composite ASQ scores and depression than Seligman et al. (1979) reported.

Other studies, however, have found support for the hypothesized relation between attributions and depression (Peterson & Seligman, 1984; Sweeney, Anderson & Baily, 1986). Janoff-Bulman (1979) found that depressives were more likely than nondepressives to blame global and stable aspects of their selves for negative events. Sharp and Tennen (1983) found that nondepressives were more likely to blame external factors for failure feedback than depressives. And, indeed, contrary to the Tennen and Herzberger (1987) findings, Miller and Moretti (1988) concluded that the majority of studies suggest that what distinguishes depressives from nondepressives is a lack of self-serving bias among depressives.

In addition, in a recent meta-analytic review, Sweeney et al. (1986) found moderate positive correlations between negative attributional style and depression. Moreover, in an earlier review of the literature, Peterson and Seligman (1984) found that negative attributional styles preceded development of depressive symptoms. In addition, Peterson and Barret

(1987) found that the ASQ predicted college students' GPA's even after controlling for other predictors such as SAT scores, and Seligman and Schulman (1986) found that insurance agents' ASQ scores predicted the amount of insurance sold over a period of two years.

Thus, the literature has not been consistent with regards to attributional differences between depressives and nondepressives, although the majority of studies have found support for such differences. What factors are responsible for this inconsistency? Peterson, Villanova and Raps (1985) concluded after reviewing 61 published studies that studies using hypothetical events instead of real events were more likely to support the attributional reformulation of learned helplessness model. The nature of the sample (i.e. mildly depressed college students versus clinically depressed patients), or the depression measure used, did not distinguish supporting versus nonsupporting studies. However, Sweeney et al. (1986) found in a meta-analytic review of 104 studies that neither the nature of the sample, event type (real versus hypothetical) or the depression measure used reliably distinguished supportive from nonsupportive studies. More recently, Robins (1988) concluded that lack of statistical power is the main reason for the mixed support. He estimated that only 8 out of 87 studies reviewed had an 80% chance of detecting a small to moderate effect.

But how damaging is to the hopelessness theory of depression this mixed support for the existence of a correlation between attributions for

negative events and depression? Alloy, Lipman, and Abramson (1992) have argued that a lack of correlation between attributional style and depression need not invalidate the model because the attributional style is neither necessary nor sufficient for the occurrence of depression

Recently, Alloy, Hartlage, and Abramson (1988) have outlined the steps necessary for a more direct and adequate test of cognitive theories of depression. One necessary test of the diathesis-stress component involves the demonstration that the interaction between the cognitive diathesis and negative life events predicts future depression. However, studies examining the contention that the attributional style is a vulnerability factor for depression, have produced mixed results. Eaves and Rush (1984), for example, found that remitted depressives continued to exhibit attributional styles that were more negative than those of nondepressive controls supporting the contention that attributional style is a stable vulnerability factor and not a mere concomitant of depression. However, other studies have found that formerly depressed subjects did not exhibit more negative attributional styles than control subjects (Hamilton & Abramson, 1983).

In response to this research, Alloy, Lipman, and Abramson (1992), have argued that since the attributional style is only a contributory and not a necessary factor in depression, the most appropriate strategy for testing the diathesis-stress component of the cognitive theories is to select subjects on the basis of the presence versus absence of a negative attributional style

and then compare them in their likelihood of exhibiting depression in the past or in the future. Using a retrospective high risk paradigm, Alloy et al. (1992) compared currently nondepressed college students who possessed either a depressed or nondepressed attributional style on their self-report of depressive episodes during the past two years. Results showed that subjects with negative attributional styles reported higher rates of past depressive episodes than subjects with a nondepressive attributional style. Of course, it is impossible to determine if past depressive episodes were due to the presence of a negative attributional style versus past depression resulting in a current negative attributional style as a scar of depression. Nevertheless, these findings are consistent with the hopelessness theory.

Other research has offered evidence that a negative attributional style is a risk factor for depression. Using a prospective design, Metalsky, Halberstadt, and Abramson (1987) administered the ASQ and a mood measure to college students seven days before receipt of a midterm grade, once again on the day of receipt of the grades, and two days after that. Attributions for the performance on the midterm were measured on the day of the receipt of the grades using the Particular Attributions Questionnaire (PAQ). Results indicated that the outcome on the test was the immediate predictor of the immediate mood reactions. However, for those students who performed poorly, depressive mood two days later was predicted only by an interaction between ASQ and test outcome. That is, subjects who

tended to make stable and global attributions for negative events became depressed when they received poor grades and continued to exhibit depression two days later, whereas subjects who tended to make unstable and specific attributions and who had also received poor grades recovered completely within the course of two days. Also, PAQ correlated with ASQ as well as with the mood shown two days after receipt of grades. Thus, ASQ predicted enduring but not immediate depression.

More recently, Metalsky and Joiner (1992) tested the role of two additional vulnerability factors: (a) generalized tendencies to make negative inferences about the self after negative life events, and (b) tendencies to infer that negative life events will result in further dire consequences. College students completed measures of the three vulnerability factors -- attributional style, inferences about the self, inferences about consequences - plus measures of depression and state-trait anxiety initially (time 1), and again five weeks later (time 2). Results were consistent with the diathesis-stress component and indicated that only under high levels of stress resulting from negative life events did each of the cognitive vulnerability factors (attributional style, inferences about self, and inferences about future consequences) interact with life events to predict onset of depressive symptoms. In addition, the cognitive diathesis x stress interactions did not predict state or trait anxiety, suggesting specificity to depressive symptoms.

Other research has focused on the extent to which particular attributional dimensions predict specific depressive symptoms. For example, Alloy, Abramson, Peterson, and Seligman (1984) administered the ASQ to a group of college students and exposed them to either escapable, inescapable, or no noise training conditions. Subsequently, and under the guise of a different experiment, subjects were asked to complete a series of anagrams. Results showed that following exposure to inescapable noise, only subjects who scored high on the globality scale of the ASQ transferred helplessness deficits from the training task to the anagram task. Subjects scoring low on globality did not differ in their anagram performance regardless of the noise condition to which they were exposed.

In general, there is accumulating evidence that a negative or pessimistic attributional style makes people vulnerable to depression. The negative attributional style, however, is not a necessary or sufficient cause for depression. This means that people can get depressed or be in a state of depression even if they do not possess a negative attributional style, and the presence of a negative attributional style would not automatically result in depression. Thus the hopelessness theory focuses on a subtype of depression: A type of depression which results when an individual who possesses a negative attributional style encounters repeated negative events. However, it also appears that depressives and nondepressives prefer internal over external attributions for positive events, but depressives take

more responsibility for negative outcomes than nondepressives. In several studies depressives have exhibited attributional evenhandedness, taking as much responsibility for negative as well as positive events.

There appears to be a contradiction between the hopelessness theory of depression assertions that a pessimistic attributional style is not necessary for depression and findings suggesting that what distinguishes depressives from nondepressives is that depressives take more responsibility for negative outcomes. However, it is not clear that the attributional evenhandedness which depressives sometimes display is indicative of undue pessimism. Depressives may take more responsibility for negative events than nondepressives, but this does not necessarily imply that depressives are pessimistic. Indeed, it is possible that depressives's attributions are only less optimistic than those of nondepressives. Could, it be more accurate to characterize depressives as exhibiting less optimism than nondepressives rather than as being unduly pessimistic?

Recently, Alloy and Ahrens (1987) have distinguished between a strong and a weak version of the cognitive models. The strong version of the cognitive models suggest that depressive cognition is indeed pessimistic. However, the weak version would argue that depressive cognition is less optimistic than nondepressive cognition, not pessimistic

One goal of the current study was to examine to what extent depressive cognition can be conceptualized as pessimistic, or as less optimistic than

nondepressive cognition. The strong version of the cognitive models would predict that depressives would take more responsibility for negative than positive events, attribute negative events to causes which are stable and global, and expect more negative than positive events to occur in the future. The weak version, on the other hand, would predict that depressives would take equal responsibility for positive and negative events, or that if they exhibit positive attributional and positive expectation biases, these biases would be more pronounced among nondepressives than depressives.

The Use of Causal Cues

Alloy, Hartlage, and Abramson (1988) have argued that individuals may manifest a particular attributional style because they rely on the same generalized beliefs (belief-based attributional style) or because they consistently rely on the same pattern of situational information (evidence-based attributional style). To what extent is the depressive's negative attributional style the result of the consistent use of causal information? Would subjects use the same type of information when explaining the outcomes of others as they would when explaining their own outcomes?

Kelley's (1967, 1973) ANOVA model has been an influential attributional framework in social psychology. According to Kelley, causal inferences are generated by the application of the "covariation principle." This principle states that subjects identify as a cause that factor which is present when the effect is present and absent when the effect is absent. When applying

the covariation principle people consider the role of a set of possible causes which are classified into person, entity and circumstance dimensions. Each of these three dimensions has a particular covariation criteria associated with it consisting of consensus, distinctiveness, and consistency, respectively. When explaining the behavior of an actor towards an entity (either another person or an object) for example the observer asks: "Do other (comparison) actors behave in the same manner towards the entity?" (consensus), "Did the actor behave in the same manner towards other (comparison) entities?" (distinctiveness), "Has the actor always behaved in the same manner towards the entity?" (consistency). There is high consensus when comparison actors behave in the same manner towards the entity, low distinctiveness when the target actor behaves in the same manner towards comparison entities, and high consistency when the actor has behaved in the same manner towards the entity in the past. Attribution theory predicts that subjects will generate an internal attribution when consensus and distinctiveness are low, and when consistency is high. In the typical attribution experiment the experimenter manipulates the value of the covariation criteria. No studies have measured the extent to which subjects differentiate between each criteria. That is, subjects have never been asked to indicate the extent to which they feel a particular covariation criteria provides information not provided by the others.

Kelley's model, as well as subsequent covariation-based attribution models (e.g. Cheng & Novick, 1992; Hewstone & Jaspars, 1987; Hilton & Slugoski, 1986), are primarily normative models in the sense that they identify what information is relevant and propose how subjects should integrate information when reasoning in a logical-rational manner. The number of studies exploring the extent to which causal judgments parallel these normative predictions is substantial (Forsterling, 1989; Hewstone & Jaspars, 1987; McArthur, 1972; McGill, 1989; Orvis, Cunningham & Kelley, 1975). These studies typically present subjects with a to-be-explained behavioral episode followed by the three covariation criteria. Most studies have found that subjects are able to respond to the covariation criteria in the manner predicted by attribution theory, although biases to underutilize consensus information and to make person attributions as opposed to external attributions have been found (Kassin, 1979; McArthur, 1972).

Some studies have adopted Kelley's model as a normative framework with which to evaluate attributional differences between depressives and nondepressives. For example, Brewin and Furnham (1986) had college subjects make attributions for hypothetical events and, subsequently, judgments about consensus and consistency information. Results indicated that judgments of consensus accounted for most of the variance for internality for both positive and negative outcomes. That is, the more subjects perceived events as more likely to happen to them than to others,

the higher their internality ratings. In addition, the absence of a false consensus effect for negative outcomes was associated with low self-esteem. For negative outcomes, consistency judgments had a strong relation to stability and globality. More recently, Crocker, Alloy, and Kane (1988) administered the ASQ and an event questionnaire to depressed and nondepressed subjects who rated the likelihood that an event will happen or had happened to themselves or others. Results showed that negative attributional style was predicted by perceptions of consistency, whereas perceptions of consensus did not explain additional variance in attributional style. For positive events, both perceived consensus and consistency predicted attributional style. In addition, perceptions of consensus and consistency for positive events were related to depression independent of attributional style. For negative events, consistency, but not consensus, had a direct effect on depression not mediated by attributional style.

Other studies have shown that depressives perceive themselves as less similar to other people even on attributes that are irrelevant to depression (Tabachnick, Crocker, & Alloy, 1983). Uncertainty and lack of control may lead depressives to be more sensitive to social comparison information and, thus, to focus on dissimilarities between self and others. Indeed, Weary, Elbing, and Hill (1987) found that depressives are more sensitive than nondepressives to social comparison information. This suggests that

depressives may consider covariation information, particularly consensus information, to be more useful than nondepressives.

Thus, perceptions of low consensus for negative events are associated with low self-esteem and high internality ratings, and perceptions of high consistency are associated with high stability and globality ratings. Do depressives perceptions of the covariation criteria associated with others' outcomes parallel their own? Do perceptions of covariation criteria affect attributional style when the target is a close other or a stranger in the same manner as when target is the self? Does distinctiveness have an impact on depressive attributions for positive and negative outcomes? That is, as predicted by attribution theory, would perceptions of low distinctiveness result in higher internality ratings? At present, no studies have examined the impact of perceptions of distinctiveness on attributional style. Thus, an additional goal of the present study was to examine the relation between estimates of distinctiveness and internality ratings. In addition, I attempted to replicate the relations between estimates of consensus and ratings of internality, and estimates of consistency and stability, and to examine if the pattern of correlations varies when the target of evaluation is another person. Finally, I examined whether depressives and nondepressives differ in their judgments of the usefulness of covariation information.

Pessimism for Self versus Other

Is the proposed depressive pessimism global in nature? That is, would depressives exhibit a belief in universal helplessness? Martin, Abramson, and Alloy (1984) found that whereas depressed students judged their personal control accurately, they tended to overestimate another person's control over an objectively uncontrollable but positive outcome. Nondepressed students, however, overestimated their personal control but perceived accurately the other person's control. However, Alloy and Ahrens (1987) found that depressive subjects made less optimistic predictions than nondepressives about the likelihood of future outcomes for both self and others. Similarly, Kuiper and MacDonald (1982) found that depressives overestimated the occurrence of negative situations and depressive reactions to those situations among fellow college students. Thus, depressives sometimes over-estimate other's control over positive outcomes, yet they also over-estimate the probability that others will face negative outcomes. Thus it is not clear how global is the tendency of depressives to extend pessimism to others. The studies reviewed above asked subjects to make predictions about future outcomes for the typical college student. In the present study, depressives were asked to make predictions about future outcomes and generate explanations for positive and negative events when the target was a close other or a stranger. Would depressives display as

much pessimism when evaluating a close other as when evaluating a stranger?

Two lines of work suggest that inferences about close others will differ from inferences about strangers. First, Schlenker and Weigold (1992) noted that individuals are not only motivated to influence the impressions audiences form of themselves, but they are also motivated to regulate the impressions audiences form of others, particularly close others. Research has shown that individuals sometimes strategically benefit others as they pursue their own self-interest (Schlenker, 1992). Furthermore, impression management models view attributions as strategic communications aimed at producing desired identities. To the extent that the accomplishments and failures of close others have more direct implications for one's identity than those of strangers, attributions about the behaviors of close others may differ from those of strangers. Second, Aron, Aron, Tudor, and Nelson (1991) have argued that much of our cognitions about a close other represent cognition "in which the other is treated as self or confused with self" (p. 242). They examined the potential impact of this cognitive inclusion of close-other-in-self in a series of experiments measuring allocation of resources, impact of actor/observer bias, and the inclusion of the other's characteristics in one's own self. Results showed that a) differences in the allocation of money in a game interaction task to self and other decreased the closer the other was to self, b) subjects recalled an equal number of

nouns when the mnemonic task was based on images of self or mother interacting with the noun but more nouns when the image was that of a strangers, and c) subjects were slower to make "me/not me" decisions about traits that differed between self and spouse.

These lines of work suggest that subjects may display self-serving biases both when judging their own performances (Weary-Bradley, 1978) and those of close others (Schlenker, 1992). However, as noted above, depressives sometimes have been found to take more personal responsibility than nondepressives for negative occurrences (Miller & Moretti, 1988). Thus, would depressives be more likely to extend their pessimistic attributional style to close others than to strangers? Alternatively, depressives may try to compensate for their poor self-concept by enhancing desirable qualities of close others in an indirect attempt at self-presentation (Schlenker, 1992; Hill, Weary, & Williams, 1986). If such is the case, depressives should exhibit a more pessimistic attributional style when judging strangers and themselves than when judging close others.

However, the quality of one's relationship with another person may also mediate how the other is evaluated (Schlenker, 1992). In order to address these issues, the attributions of the outcomes of two types of close other will be examined: Closest roommate and closest parent. Is the quality of the relation with parent and roommates different for depressives and

nondepressives? Could this mediate any potential differences in how the other is evaluated?

The depression literature suggests that the quality of the relation between depressives and their roommates may be lower than the quality of the relation between nondepressives and their roommates. For example, various studies have shown that adults living with a depressed person experience more stress than those living with someone who is not currently depressed. Coyne, Kessler, Tal, Turnbull, Wortman et al. (1987) found that spouses of depressives reported numerous burdens and greater distress in response to their spouses' symptoms. Other research has shown that the relations of depressive college students with their roommates are more negative and conflictual than those of nondepressed students (Burchill & Stiles, 1988). Roommates of depressives tend to resent their frustrating position of trying to alleviate the depressives' suffering, whereas depressives resent their perceived rejection and lack of support. For example, Howes, Hokanson, and Lowenstein (1985) found that roommates of depressive students were more depressed than roommates of nondepressive students, and Hokanson, Lowenstein, Hedeon, and Howes (1986) found that depressives perceived their roommates as more distrustful and competitive. Indeed, Coyne et al. (1987) argue that negative reactions from others may play a role in the maintenance of depression.

How do depressives perceive the outcomes of those they live with? What types of attributions do they generate for those outcomes? The apparent negative interaction style between depressives and their roommates suggests the possibility that depressives may exhibit a tendency to evaluate more negatively the outcomes of their roommates than they would their own outcomes.

In the present study I also examined whether the quality of the relation with roommate differed for depressives and nondepressives. In addition, I examined potential differences between depressives and nondepressives in the quality of their relation with parent. Next, I examined if there is a relation between ratings of relationship quality with a close other and the extension of optimism or pessimism to close others.

Summary and Hypotheses

The major goal of the present study was to examine whether depressive pessimism exists as proposed by the cognitive models of depression, and if it does, to examine if it is confined to self or if it is extended to close others and strangers. Pessimism was measured in terms of attributions for positive and negative hypothetical events, expectations about the future, and perceptions of the covariation criteria identified by Kelley's (1967) attribution model.

An additional goal consisted of examining the extent to which subjects' attributions for hypothetical events are related to perceptions of covariation,

and whether attributions for parent and roommate are related to ratings of relationship quality in addition to perceptions of covariation.

Consistent with the cognitive models of depression, depressives were hypothesized to offer more internal, stable and global attributions for negative events than nondepressives, and not to exhibit a positive attributional bias.

Depressives were also hypothesized to be less likely than nondepressives to believe that positive events occur to others with more frequency than negative events, that negative events are less common than positive events, and that positive events have occurred in the past with more frequency than negative events. In other words, depressives were not expected to exhibit a positive bias when making estimates of consensus, consistency, and distinctiveness.

Both depressives and nondepressives were expected to evaluate roommates less optimistically than self or parent. Depressives were expected to evaluate parent and self less optimistically than nondepressives, and evaluate strangers more optimistically than parent or self.

Estimates of consensus and distinctiveness were hypothesized to be negatively correlated with internality ratings, while estimates of consistency were hypothesized to be positively correlated to stability ratings. I also examined whether these patterns of correlation varied with target of

evaluation and event type (positive versus negative), but no specific hypotheses were made.

Finally, subjects were asked to rate the usefulness of the covariation criteria in generating each explanation. Consistent with previous which has found that consensus information tends to be underutilized (Kassin, 1979), consensus was expected to be judged less useful than distinctiveness and consistency. I also explored whether these usefulness ratings differed with target of evaluation. In addition, consistent with Weary's et al. (1987) arguments that depressives are more sensitive to social comparison information than nondepressives, depressives were expected to judge covariation information, particularly consensus, more useful than nondepressives.

METHOD

Subjects

One hundred and seventy-six University of Florida students participated in the study in partial fulfillment of the general psychology course requirement.

Materials and Procedure

One thousand three hundred and sixty-two subjects completed the Center for Epidemiologic Studies Depression Scale (CES-DC) during the pre-testing session the first week of classes. The scores ranged from 7 to 73, and the median was 33 (higher scores indicate more severe depression). Radloff (1977) obtained test-retest reliability for the CES-DC of .32 for four months and .67 for four weeks, and Weisman, Prusoff and Newberry (1975) found a .81 correlation between the CES-DC and the Beck Depression Inventory. The scale is presented in Appendix A.

Subjects scoring at the top one-third of the distribution (scores 40 and above) and bottom one-third (scores 27 and below) were contacted by phone by a research assistant and invited to participate in the experiment. The mean CES score for the depressive group was 46.7, and scores ranged from 65 to 40. The mean for the nondepressive group was 24.1, and scores ranged from 27 to 7. A total of eight subjects were invited to participate in

each session. Experimental assistants scheduled an equal number of depressed and nondepressed subjects for each session.

Upon arrival at the laboratory the experimenter handed out a packet to each subject containing the Attributional Style Questionnaire (ASQ) and the Relationship Quality Questionnaire (RQQ). The ASQ was developed by Seligman, Abramson, Semmel, and von Bayer (1979) and consists of twelve hypothetical events (six positive and six negative). These hypothetical events are listed in Appendix B in the order in which they were presented. Half of the events are achievement oriented and half are interpersonally oriented. Peterson et al. (1982) found high positive correlations between ratings of attributional dimensions for achievement and interpersonal events. Thus, the distinction between achievement and interpersonal events will not be examined in the present study.

When completing the ASQ subjects are asked to imagine that they are in the situations described and to write one major cause of the outcome. Subsequently, subjects rate each cause on three seven-point scales consisting of locus, stability, and globality. The internal consistency of the ASQ has been explored in a number of studies. Peterson, Semmel, von Baeyer, Abramson, Metalsky, and Seligman (1982) reported modest Cronbach's alphas ranging from .44 to .69 for the attributional dimensions, and .75 and .72 for the composite positive and negative attributional styles respectively. Tennen and Herzberger (1987) reported Cronbach's alpha of

.56 for stability ratings, .66 for globality ratings but .21 for internality ratings. Peterson et al. (1982) also reported test-retest reliabilities in a college sample over a period of four to five weeks ranging from .57 to .70.

The RQQ was developed by Schlenker (1992) and measures ten dimensions which are hypothesized to be important for beneficial impression management. Originally, the scale included the following six dimensions: connectedness, caring, empathy, emotion-sharing, supportiveness, and competitiveness. Subsequently, the following four dimensions were added: public link, intimacy, liking and commitment. Connectedness reflects the extent to which the other person is seen as an extension of self (e.g., "I think of my friend as part of myself"). (The scale is presented in Appendix C). Caring reflects the extent to which the respondent expresses concern about the welfare of the other (e.g., "My friend's needs are about as important to me as my own"). Empathy reflects the extent to which subjects say they imagine what the other person is thinking or doing (e.g., "I can usually imagine exactly what my friend is thinking"). Emotion-sharing reflects the experience of vicarious emotion (e.g., "When my friend feels sad, I feel sad, too"). The supportiveness dimension was constructed to reflect self-reports of encouraging, reassuring types of behaviors (e.g., "I try to emphasize my friend's good points and downplay my friend's bad points"). Competitiveness reflects the extent to which the friend is also seen as a competitor (e.g., "I can't stand it if my friend gets the better of

me"). The public link dimension is measured with items such as, "If my friend does something good, it reflects on me in the eyes of other people." Intimacy includes items such as, "I can confide in my friend about anything." Liking includes items such as, "I think my friend is unusually well adjusted." Finally, the commitment dimension is measured with items such as, "I can't imagine ending my relationship with my friend."

The original six-dimension RQQ scale was administered to 148 introductory psychology students at the University of Florida (Schlenker, 1992). Subjects were asked to complete the questionnaire rating either (a) their best friend, or (b) a good friend who is not their best friend. Separate factor analyses (principal components with a varimax rotation) of the ratings of best and good friend revealed six distinct factors, one corresponding to the preceding dimensions. Thus, the dimensions seem to be empirically as well as conceptually distinct (Schlenker, 1992).

Subjects completed the ASQ using either self, the parent they felt closest to, the roommate they felt closest to, or the typical college student as the target of evaluation. Subjects were asked to imagine each event happening to the target. Next, they were asked to make estimates for the three covariation criteria identified by Kelley's (1967) attribution model. Specifically, subjects were asked to (a) estimate the extent to which the particular event happens to comparison others (perceived consensus), (b) to indicate the frequency with which the target may have experienced each

event in the past (perceived past consistency), (c) to indicate how unusual in comparison with other events in the life of the target this event is (perceived distinctiveness). Subjects also gave an estimate of the probability that the event will reoccur in the future to the target (expected future consistency).

Next, subjects wrote down one major cause for the event. They then provided internality, stability, and globality ratings for the cause they wrote down. Finally, subjects rated how useful they considered each of the three covariation criteria for generating the explanation (see Appendix D).

After completion of this modified version of the ASQ, subjects were asked to indicate the extent to which parents, siblings, friends, and roommates experience as many successes and failures in life as they do (see Appendix E). These questions provided additional measures of the extent to which subjects extend optimism and/or pessimism to close others.

Finally, subjects completed the RQQ using either the parent or the roommate they felt closest to as the target of evaluation. As noted above, the RQQ version used was the recent version containing the ten dimensions. Upon completion of the packet, subjects were debriefed and dismissed.

RESULTS

Perceptions of Covariation

Recall that one goal of the current study was to measure the extent to which estimates of covariation information for others parallel estimates for oneself. In addition, according to the strong version of the cognitive models, depressives should not exhibit a positive bias when making these estimates.

The mean perceptions of consensus, distinctiveness and consistency were submitted to separate 2 (depression) $\times$ 4 (target of evaluation) $\times$ 2 (event: positive, negative) ANOVAs with the last factor as a repeated measure. Tables 1, 2 and 3 display the perceptions of covariation for positive and negative events, and the discrepancies between perceptions for both types of events, for consensus, distinctiveness, and consistency, respectively.

Consensus.

The analysis for consensus yielded a main effect for event, $F(1, 168) = 38.30$, $p < .0001$, indicating higher perceptions of consensus for positive (4.54) than negative events (4.04). However, this main effect was qualified by a two-way interaction with depression, $F(1, 168) = 10.00$, $p < .001$. Simple effect comparisons revealed that depressives and nondepressives did not differ in their judgments of consensus for positive events, $F(1, 174) =$

Table 1. Depressives and nondepressives estimates of consensus of positive and negative events occurring to self, close and strangers

	Target of evaluation				Mean
	S	P	R	T	
Depressives					
Positive	4.66	4.68	4.16	4.38	4.46
Negative	4.57	3.71	3.96	4.59	4.21
Bias	.08	.96	.19	-.21	.25 _a
Nondepressives					
Positive	4.86	4.56	4.32	4.82	4.63
Negative	4.17	3.11	3.63	4.43	3.82
Bias	.69	1.45	.69	.38	.81 _b
Bias Mean	.38 _b	1.19 _a	.44 _b	.08 _b	

Note. S = self; P = parent; R = roommate; T = typical student. Means with different subscripts differ from one another at $p < .05$.

1.53, $p < .22$. Depressives, however, made higher estimates of consensus for negative events than nondepressives, $F(1, 174) = 5.91$, $p < .01$. A consensus bias score was also created by subtracting the mean perception of consensus for negative events from the mean perception for positive events. High positive values of this score reflect a positive bias. As Table 1 indicates, the consensus bias score was significantly larger for depressives than nondepressives, $F(1, 168) = 10.00$, $p < .001$. That is, the tendency to perceive that positive events were more likely to occur to others than negative events was more pronounced among nondepressives.

In addition, a two-way interaction between event and target was found, $F(3, 168) = 7.42, p < .0001$. Simple effect tests revealed significantly higher perception of consensus for positive than negative events when the target of evaluation was parent rather than roommate, $F(1, 172) = 9.25, p < .002$, self, $F(1, 172) = 10.37, p < .001$, or typical student, $F(1, 172) = 22.56, p < .0001$. No significant differences were found for judgments between self and roommate, $F < 1$, or between self and typical student, $F(1, 172) = 2.51, p < .11$. Thus subjects perceived higher consensus for positive than negative events when the target was parent rather than self or other. The two way interaction between depression and target of evaluation was not significant ($F < 1$).

Distinctiveness.

The analysis for distinctiveness also yielded a main effect for event, $F(1, 168) = 61.05, p < .0001$. In this case, however, higher perceptions of distinctiveness occurred for negative (4.46) than positive events (3.66). That is, subjects perceived negative events to be more unusual than positive events. This main effect was qualified by a two-way interaction with depression, $F(1, 168) = 10.23, p < .001$. Simple comparison analyses revealed that depressives made higher estimates of distinctiveness for positive events than nondepressives, $F(1, 174) = 11.31, p < .0009$, but did not differ from nondepressives in their estimates for negative events, $F(1, 174) = 2.60, p < .10$. A distinctiveness bias score also was calculated

Table 2. Depressives and nondepressives estimates of distinctiveness of positive and negative events for self, close others and strangers

	Target of evaluation				Mean
	S	P	R	T	
Depressives					
Positive	3.73	3.77	4.14	3.83	3.87
Negative	4.06	5.48	4.43	3.45	4.33
Bias	-.33	-1.70	-.28	-.33	-.46 _a
Nondepressives					
Positive	3.28	3.44	3.37	3.55	3.40
Negative	4.56	5.65	4.68	3.41	4.62
Bias	-1.27	-2.20	-1.31	.14	-1.22 _b
Bias					
Mean	-.80 _b	-1.95 _a	-.79 _b	.26 _c	

Note. S = self; P = parent; R = roommate; T = typical student. Means with different subscripts differ from one another at $p < .05$.

by subtracting the mean estimate of distinctiveness for negative events from the mean estimate for positive events. High negative values indicate that subjects perceived negative events to be more unusual than positive events. As Table 2 indicates, nondepressives perceived higher distinctiveness than depressives for negative than positive events, $F(1, 168) = 10.23$, $p < .001$. In addition, a two-way interaction between event and target was found, $F(3, 168) = 17.59$, $p < .0001$. Simple effect tests revealed higher perceptions of distinctiveness for positive than negative when the target of evaluation was parent rather than typical student, $F(1, 172) = 52.93$, $p <$

.0001, roommate, $F(1, 172) = 14.61$, $p < .0002$, or self, $F(1, 172) = 13.96$, $p < .0003$. That is, subject's tendencies to estimate higher distinctiveness for negative than positive events was most pronounced for parent than typical student, roommate, or self. In addition, subjects estimated higher distinctiveness for negative than positive events when the target was self rather than typical student, $F(1, 172) = 13.11$, $p < .0004$, but not roommate, $F < 1$. The two-way interaction between depression and target was not significant ($F < 1$).

Consistency.

The analysis for consistency yielded a main effect for event, $F(1, 168) = 118.78$, $p < .0001$, indicating higher perceptions of consistency for positive (4.07) than negative events (3.17). This main effect was qualified by a two-way interaction with depression, $F(1, 168) = 6.66$, $p < .01$. Depressives and nondepressives did not differ in their estimates of consistency for positive events, $F < 1$, but depressives made higher estimates of consistency for negative events than nondepressives, $F(1, 174) = 11.02$, $p < .001$. Also a consistency bias score was calculated by subtracting the mean estimate of consistency for negative events from the mean estimate for positive events. As indicated in Table 3, nondepressives estimated higher consistency for positive than negative events than depressives, $F(1, 168) = 6.66$, $p < .01$. In addition, a two-way interaction between event and target was found, $F(3, 168) = 11.56$,

Table 3. Depressives and nondepressives estimates of consistency of positive and negative events for self, close others and strangers

	Target of evaluation				Mean
	S	P	R	T	
Depressives					
Positive	4.08	4.07	3.90	4.18	4.06
Negative	3.49	2.61	3.26	4.09	3.38
Bias	.58	1.46	.63	.08	.67 _a
Nondepressives					
Positive	4.35	3.67	3.86	4.43	4.07
Negative	2.76	2.08	2.73	4.25	2.88
Bias	1.58	1.59	1.13	.17	1.18 _b
Bias					
Mean	1.05 _a	1.52 _a	.88 _{ab}	.12 _c	

Note. S = self; P = parent; R = roommate; T = typical student. Means with different subscripts differ from one another at $p < .05$.

$p < .0001$. Simple effect tests revealed higher estimates of consistency for positive than negative events when the target of evaluation was parent rather than roommate, $F(1, 172) = 7.43$, $p < .007$, parent rather than typical student, $F(1, 172) = 34.02$, $p < .0001$, or self rather than typical student, $F(1, 172) = 16.20$, $p < .0001$. Thus, subjects' tendency to judge higher consistency for positive than negative events was most pronounced for parent than roommate or typical student, and for self rather than typical student. No differences were found in this bias between

estimates for parent and self. The two-way interaction between depression and target was not significant, $F(3, 168) = 1.64$, $p < .18$.

Summary.

In general, subjects exhibited positive covariation judgment biases by perceiving that people typically experience more positive than negative events, that negative events are more unusual and less frequent than positive events. This positive bias was more pronounced among nondepressives, but not absent among depressives. Subjects also were most optimistically biased when the target of evaluation was the parent, and least optimistically biased when the target was the typical college student. No differences were found between depressives and nondepressives in their perceptions of covariation for close others and strangers.

Ratings of Usefulness of Covariation Information

Consistent with research findings indicating that depressives are more sensitive to social comparison information, it was hypothesized that depressives would judge covariation information, particularly consensus, to be more useful than nondepressives would.

Subjects' ratings of the usefulness of covariation information were submitted to a 2 (depression) $\times$ 4 (target of evaluation) $\times$ 2 (event: positive or negative) ANOVA with the last factor as a repeated measure. Separate analysis were conducted for consensus, distinctiveness, and consistency.

Table 4. Depressives and nondepressives mean usefulness ratings of consensus, distinctiveness and consistency

	Target				Mean
	S	P	R	T	
Consensus					
Depressives					
Positive	4.21	3.32	3.60	4.50	3.92
Negative	4.11	3.10	3.76	4.70	3.94
Nondepressives					
Positive	3.50	3.00	3.48	4.46	3.56
Negative	3.57	3.00	3.59	4.77	3.68
Mean	3.84	3.10	3.60	4.61	
Distinctiveness					
Depressives					
Positive	3.72	3.64	3.70	3.72	3.77
Negative	3.78	3.66	3.93	3.78	3.83
Nondepressives					
Positive	3.48	3.03	3.92	3.95	3.59
Negative	3.42	3.01	3.99	4.27	3.65
Mean	3.60	3.33	3.88	3.93	
Consistency					
Depressives					
Positive	3.48	3.64	3.71	4.57	4.09
Negative	4.04	3.76	3.92	4.63	4.11
Nondepressives					
Positive	3.67	3.62	4.16	4.65	3.99
Negative	3.65	3.24	4.03	4.87	3.90
Mean	3.71	3.56	3.95	4.68	

Note: S = self; P = parent; R = roommate; T = typical student.

Consensus.

The analysis for consensus only yielded a main effect for target, $F(3, 168) = 10.92$, $p < .0001$. Tukey tests revealed that subjects judged consensus more useful when the target was the typical student rather than self, roommate, parent, and when the target was self rather than parent.

Distinctiveness.

The analysis for distinctiveness only yielded a main effect for target, $F(3, 168) = 3.16$, $p < .02$. However, no simple comparison reached significance at .05 level using Tukey.

Consistency.

The analysis for consistency yielded a main effect for target, $F(3, 168) = 6.41$, $p < .0004$. Tukey tests revealed that subjects judged consistency more useful when the target was typical student rather than self, roommate, or parent.

Summary.

In general, subjects rated covariation most useful when making judgments about the typical student. No differences were found between depressives and nondepressives in usefulness ratings.

Internal Consistency of the ASQ

Modest internal consistency coefficients were found for the three attributional dimensions of the ASQ. The Cronbach alpha for internality was .57, for stability .76, and for globality .66. These values are generally

consistent with those previously found by Tennen and Herzberger (1987) who reported Cronbach alphas of .21, .56, and .66 for internality, stability and globality respectively, and Peterson et al. (1979) who reported alphas ranging from .44 to .69 for the three attributional dimensions.

Attributional Biases

Consistent with the strong version of the cognitive models, depressives were hypothesized to make more internal, stable, and global attributions for negative events than nondepressives, and not to exhibit a positive attributional bias.

A negative composite score was generated for each subject by summing the mean of internality, stability, and globality for negative events and obtaining the mean. This value was submitted to a 2 (depression) x 4 (target of evaluation) ANOVA. A planned contrast between depressives and nondepressives negative composite scores when the target of evaluation was self did not reach significance, $F(1, 168) = 1.10$, $p < .29$. That is, depressives and nondepressives did not differ in their negative composite scores. No other significant effects were obtained.

The negative composite was subtracted from the positive composite score to yield an attributional bias score. These attributional bias scores, presented in Table 5, were significantly different from zero for both depressives, $t(99) = 4.86$, $p < .0001$, and nondepressives, $t(74) = 5.34$,

Table 5. Depressives and nondepressives positive and negative composites, and positive attributional bias scores

	Target of evaluation				Mean
	S	P	R	T	
Depressives					
Positive	5.12	5.18	4.74	4.97	5.01
Negative	4.62	4.54	4.62	4.61	4.60
Bias	.49 _a	.72 _a	.12 _a	.36 _a	.42 _b
Nondepressives					
Positive	5.16	4.89	4.96	5.09	5.03
Negative	4.40	4.77	4.65	4.49	4.57
Bias	.76 _a	.11 _b	.31 _b	.60 _a	.45 _b
Mean					
Bias	.64	.46	.21	.44	

Note. S = self; P = parent; R = roommate; T = typical student. Within rows, excluding marginal means, means not sharing a subscript differ from one another at $p < .05$.

$p < .0001$. In other words, both depressives and nondepressives exhibited a positive attributional bias.

The attributional bias score was submitted to a 2 (depression) x 4 (target of evaluation) ANOVA. No significant main effect was found for depression $F < 1$, or target of evaluation, $F(3, 168) = 2.03$, $p < .11$. However, a significant interaction between depression and target was found, $F(3, 168) = 2.93$, $p < .03$. The simple main effect for target was not significant among depressives, $F(3, 168) = 2.40$, $p < .10$. In other words, depressives' attributions for hypothetical events were not more positively

biased for self than for close others or strangers. However, the simple main effect for target was significant among nondepressives, $F(3, 168) = 2.60$, $p < .05$. Simple comparisons between nondepressives bias scores for self and roommate approached significance, $F(1, 168) = 3.4$, $p < .06$, indicating that nondepressives manifested a stronger positive attributional bias for self than roommate. In addition, nondepressives exhibited a stronger positive attributional bias when explaining hypothetical events occurring to self than parent, $F(1, 168) = 6.56$, $p < .01$. No significant difference was found between nondepressives explanations for self and typical student, ($F < 1$). It appears that for nondepressives, the closer the other was to self, the less the positive attributional bias manifested.

Additional simple comparisons were conducted between depressives and nondepressives attributional bias score for each target of evaluation. The only significant effect obtained was between judgments for parent, $F(1, 168) = 6.03$, $p < .01$. As Table 5 indicates, depressives exhibited a stronger attributional positive bias than nondepressives when the target of evaluation was the parent.

Comparison Between Self and Other

Differences between depressives and nondepressives mean judgments of the extent to which others experience as many successes and failures as self were examined. Recall that subjects made estimates for father, mother, brother, sister, roommate and best friend. However, because 120 subjects

indicated not having either a brother, sister, or roommate, only 57 subjects were available for a repeated measures ANOVA. Therefore, the categories of father and mother were combined into a single category for parent, consisting of the judgment for father unless the subject indicated not having a father. Similarly, a category for sibling was created consisting of the judgment for brother unless the subject indicated not having a brother. This allowed 137 subjects in the 2 (depression) x 4 (other: parent, sibling, roommate, friend) x 2 (event: success, failures) ANOVA with the last two factors as repeated measures.

This analysis yielded a main effect for depression, $F(1, 135) = 23.28, p < .0001$. As Table 6 indicates, depressives gave lower estimates than nondepressives that close others experience as many successes and failures as they do. In other words, depressives perceived themselves as experiencing more dissimilar types of outcomes than those experienced by close others. In addition, a main effect for event was found, $F(1, 135) = 18.16, p < .0001$, indicating that subjects estimates of the extent to which close others experience similar types of outcomes as self were higher when the outcomes were successes (5.48) than failures (4.83). The interaction between event and depression did not reach significance, $F(1, 135) = 2.21, p < .13$. A main effect for other was also found, $F(3, 405) = 8.02, p < .0001$, but it was qualified by a two-way interaction with event, $F(3, 405) = 22.80, p < .0001$. Simple comparisons revealed that the tendency

Table 6. Depressives and nondepressives estimates of the probability that others would encounter as many successes and failures as self

	Other				Mean
	P	S	R	F	
Depressives					
Successes	5.75	5.05	4.85	5.55	5.30
Failures	3.43	4.51	4.85	4.89	4.42
Nondepressives					
Successes	6.27	5.57	5.35	5.49	5.67
Failures	4.23	5.33	5.66	5.76	5.24

Note. P = parent; S = sibling; R = roommate; F = friend.

to believe that close others would experience more successes than failures as self was more pronounced when the close other was parent rather than sibling, $E(1, 135) = 34.44$, $p < .0001$. The simple comparison between sibling and roommate did not reach significance, $E(1, 135) = 2.72$, $p < .10$, and neither did the simple comparison between roommate and friend, $E(1, 135) = 1.98$, $p < .16$. The interaction between other and depression was not significant ($E < 1$), and neither was the three-way interaction between depression, other, and event ($E < 1$).

In summary, both depressives and nondepressives were more likely to believe that parent, but not sibling, roommate, or friend, share more successes than failures with self. It appears that subjects had a more positive view of parent than sibling, roommate, or friend. Depressives and

nondepressives did not differ in this tendency, but depressives perceived themselves as experiencing more dissimilar types of outcomes to those experienced by close others.

Expectations About the Future.

Subject's mean estimates of the likelihood that each event will reoccur are presented in Table 7, and were submitted to a 2 (depression) x 4 (target) x 2 (event: positive, negative) ANOVA with the last factor as a repeated measure. This analysis yielded a main effect for event, $F(1, 168) = 123.11$ $p < .0001$. Not surprisingly, subjects judged the probability of positive events reoccurring (4.83) to be higher than the probability of negative events (3.78). This main effect was qualified by a two-way interaction with depression, $F(1, 168) = 5.49$ $p < .02$. Simple effect comparisons revealed no significant differences between depressives and nondepressives in their estimates of the probability that positive events will reoccur, $F(1, 174) = 1.40$, $p < .23$. However, depressives gave higher estimates of the probability that negative events will reoccur than nondepressives $F(1, 174) = 3.41$, $p < .06$. An expectation bias score also was calculated by subtracting the mean estimate for negative events from the mean estimates for positive events. As Table 7 indicates, this expectation bias was larger for nondepressives than depressives, $F(1, 168) = 5.49$ $p < .02$. In other words, the tendency to judge the probability of

Table 7. Depressives and nondepressives estimates of the likelihood of recurrence of positive and negative events

	Target of evaluation				Mean
	S	P	R	T	
Depressives					
Positive	5.10	4.71	4.52	4.72	4.76
Negative	4.58	2.68	3.61	4.78	3.93
Bias	.51	2.03	.90	-.05	.83 _a
Nondepressives					
Positive	5.39	4.25	4.92	5.12	4.94
Negative	3.96	2.19	3.44	4.87	3.58
Bias	1.42	2.06	1.48	.24	1.36 _b
Bias Mean	.96 _b	2.04 _a	1.19 _b	.09 _c	

Note. S = self; P = parent; R = roommate; T = typical student. Means with different subscripts differ from one another at $p < .05$.

positive events reoccurring to be higher than the probability of negative events was more pronounced among nondepressives.

In addition, there was a two-way interaction between event and target, $F(3, 168) = 16.28$, $p < .0001$. Simple tests revealed that subjects made higher judgments of recurrence for positive than negative events when the target was parent rather than roommate, $F(1, 172) = 10.18$, $p < .001$, parent rather than self, $F(1, 172) = 15.70$, $p < .0001$, parent rather than typical student, $F(1, 172) = 52.08$, $p < .0001$, and self rather than typical student, $F(1, 172) = 11.12$, $p < .001$. Thus, subjects expressed more

optimism about the recurrence of positive outcomes for parent than others including self, and more optimism for self than typical student.

In general, optimistic biases occurred among both depressives and nondepressives but were more pronounced among nondepressives. However, when depressives explicitly compared their negative outcomes with those of others, they exhibited a trend towards what Abramson et al. (1978) referred to as personal helplessness. That is, depressives were less likely than nondepressives to believe that others experience as many failures as they do. This trend, however, did not reach significance. When no explicit comparisons with self were made, as when judging the probability that positive events will reoccur, depressives exhibited less optimism than nondepressives but did not manifest personal helplessness. Both depressives and nondepressives gave more optimistic judgments for parent than self or other, and self than stranger.

Ratings of Quality of Relationships

The current study also examined differences between depressives and nondepressives in their ratings of the quality of their relations with close others. It was expected that depressives would rate the quality of their relation with their roommate lower than nondepressives. No specific predictions were made for ratings of relationship quality with parent.

Recall that subjects completed the RQQ using either the parent or the roommate they felt closest to as target of evaluation. Subjects' mean

Table 8. Depressives and nondepressives ratings of relationship quality dimensions for parent and roommate

Relationship Quality Dimensions	Depression						Mean
	Depressives			Nondepressives			
	P	R	Mean	P	R	Mean	
Connectedness	5.74	3.91	4.86	6.21	4.02	5.07	4.95
Caring	7.70	5.84	6.81	8.27	6.36	7.28	7.01
Public	4.74	3.29	4.04	4.80	3.10	3.91	3.99
Empathy	6.03	5.95	5.99	6.34	6.25	6.29	6.12
Emotion	6.89	4.58	5.78	6.82	5.20	5.97	5.86
Competition	2.95	3.89	3.40	3.08	3.04	3.06	3.26
Support	6.51	5.92	6.23	6.59	6.35	6.47	6.33
Intimacy	7.27	5.91	6.62	8.04	6.70	7.34	6.93
Commitment	7.74	5.59	6.71	8.11	6.00	7.01	6.84
Liking	7.41	5.36	6.43	8.21	6.15	7.14	6.73

Note. P = parent; R = roommate.

scores on the ten dimensions of the Relationship Questionnaire were submitted to a 2 (depression) x 2 (target: parent, roommate) x 10 (dimension: connectedness, caring, public link, empathy, emotion-sharing, competitiveness, supportiveness, intimacy, commitment, and liking) ANOVA with the last factor as a repeated measure.¹ This analysis yielded a main effect for target, $F(1, 167) = 35.32$, $p < .0001$. Not surprisingly, subjects rated the quality of their relation with parent to be better than their relation with roommate ($M_s = 6.39$ vs 5.11 , respectively). The main effect for depression was not significant, $F(1, 167) = 2.12$, $p < .14$, and neither was the interaction between depression and target, $F < 1$. Thus,

depressives did not differ from nondepressives in how they perceived the quality of their relationships with parent or roommate (see Table 8).

However, a two-way interaction between depression and dimension was found, $F(9, 1503) = 2.80, p < .002$. Simple comparisons revealed that depressives rated their relationship with the target to be less intimate than nondepressives ($M_s = 6.62$ vs 7.34 , respectively), $F(1, 167) = 5.85, p < .01$. In addition, depressives gave lower ratings of liking for the target than nondepressives ($M_s = 6.43$ vs 7.14), $F(1, 167) = 8.90, p < .003$. In general, depressives and nondepressives gave similar relationship quality ratings for both parent and roommate. The only exceptions were that depressives indicated lower intimacy with target, and less liking of the target than nondepressives.

Quality of Relation and Biases

Schlenker (1992) hypothesized that the greater the connectedness (extent to which the other is seen as an extension of self) and caring (extent to which subjects express concern about the welfare of other), the greater the tendency to protect the identity of the other. Thus, in the current study, it was hypothesized that the higher the degree of connectedness to, and caring for, the target, the higher the optimistic bias manifested when evaluating him/her. To test this hypothesis, correlation analysis between connectedness, caring, the attributional bias score, and the expectation bias score were conducted. Only subjects who completed the ASQ using parent

or roommate as target and who completed the RQQ using the corresponding target were included in the analysis. This necessary constraint resulted in a total of 44 subjects-- 21 subjects in the analysis of parent as target, and 23 subjects in the analysis of roommate as target.

In the analysis for parent, connectedness was positively correlated with a positive bias in expectations about the future ($r = .53, p < .01$), and positive attributional bias ($r = .41, p < .06$). That is, the more parent was seen as an extension of self the greater the tendency to judge that positive events were more likely to occur to him/her in the future, and the more responsible he/she was seen for positive in comparison to negative events. Furthermore, caring was positively correlated with positive expectations about the future ($r = .45, p < .03$). However, the correlation with attributional bias did not reach significance ($r = .25, p < .27$).

The analysis for roommate yielded a slightly different pattern. The correlations between connectedness and expectation bias ($r = .24, p < .25$), and with attributional bias ($r = -.08, p < .69$) did not reach significance. However, the correlation between caring and expectation bias was positive and significant ($r = .42, p < .04$), while the correlation with attribution bias was not ($r = .21, p < .33$).

Thus, the more connected subjects felt towards parent, the larger the positive expectation and attributional biases. The more subjects cared about parent and roommate, the larger the positive expectation bias.

Causal Cues and Attributions

An additional goal of the present study was to measure the extent to which subjects' attributions were related to their perceptions of covariation and whether this relation differed for different targets of evaluation. Recall that according to attribution theory consensus and distinctiveness should be negatively related to internality. In addition, consistency should be positively related to stability. In order to examine this issue, separate correlational analyses between perceptions of consensus, distinctiveness, and consistency and the attributional dimensions were conducted for each target of evaluation. By conducting separate analyses, it was thus possible to detect any differences in the relations between perception of covariation and ratings of attributional dimensions for different targets of evaluation.

In addition, Kelley's model proposes that each of the three covariation criteria is relevant during causal induction. However, subjects may not always use all of the criteria when generating an attribution. Indeed, there is evidence that people tend to underutilize consensus information (Kassin, 1979). For this reason, I examined the relations of each covariation criteria with ratings of the relevant attributional dimension when ignoring the other two criteria, as well as controlling for the other two criteria.

Tables 9, 10, 11 and 12 display these correlations and partial correlations for parent, self, roommate, and typical student, respectively. Inspection of these tables reveals that many of the partial correlations are

Table 9. Correlations and partial correlations of each covariation criteria with the three attributional dimensions for positive and negative events for parent

	Covariation Criteria					
	Consensus		Distinctiveness		Consistency	
	Corr.	Partial	Corr.	Partial	Corr.	Partial
Positive						
Internal	.25	-.12	-.19	-.01	.55***	.62***
Stable	.41**	.16	-.28*	-.07	.48***	.36*
Global	.23	-.03	-.04	.09	.36*	.41*
Negative						
Internal	.20	.39*	-.01	-.26	-.13	-.54*
Stable	.25	.35*	-.16	-.35	.01	-.43*
Global	.23	.32	-.07	-.17	.01	-.29

Note. Corr = correlation; Partial = partial correlation. *** $p < .0005$.
 ** $p < .005$, * $p < .06$.

higher than the zero-order correlations, and in some cases the sign of the correlation changes. This is indicative of the presence of a suppressor variable. That is, in most analyses, at least one of the covariation variables has a near-zero correlation with the dependent variable but correlates with one or more of the other predictors. Its presence in the analysis suppresses irrelevant variance, and thus increases the partial correlations of the other predictors (Pedhazor, 1982). It is clear that the variable functioning as a suppressor variable is not the same one in each analysis.

The partial correlations for parent for positive events indicated that of the three covariation variables, consistency accounted for most of the variance of internality, stability, and globality. The higher the perceptions of past

consistency for positive events, the higher the internality, stability, and globality ratings for positive events. For negative events the pattern of relations between the covariation variables and attributional dimensions was inconsistent with attribution theory. The correlations between consensus and internality and stability, controlling for distinctiveness and consistency, were positive, whereas the correlation between consistency and internality and stability, controlling for consensus and distinctiveness, were negative. That is, the more subjects perceived the event to have occurred in the past, the less internal and stable the attributions. In addition, the more subjects perceived that the event occurs to others like the parent, the more internal and stable their attributions. This pattern is inconsistent with attribution theory which suggests stable attributions when consistency is high, and external attributions when consensus is high.

The analyses for roommate yielded a different pattern. When evaluating the relation between each covariation criteria with each attributional dimension controlling for the other two criteria, the only significant partial correlation obtained was between internality and distinctiveness. As indicated in Table 10, controlling for consensus and consistency, the higher the perceptions of distinctiveness the lower the internality ratings, as predicted by attribution theory. For negative events no significant relations were obtained between the covariation criteria and ratings of attributional dimensions.

Table 10. Correlations and partial correlations of each covariation criteria with the three attributional dimensions for positive and negative events for roommate

	Covariation Criteria					
	Consensus		Distinctiveness		Consistency	
	Corr.	Partial	Corr.	Partial	Corr.	Partial
Positive						
Internal	.09	-.30	-.19	-.40*	-.02	-.04
Stable	.29*	.05	-.37	-.28	.30*	.10
Global	.28*	.10	-.28	-.12	.30*	.17
Negative						
Internal	.18	-.17	-.23	-.32	-.01	.11
Stable	.13	.06	-.29	-.25	.22	.04
Global	.20	.28	-.19	-.30	.06	.25

Note. Corr = correlation; Partial = partial correlation. *** $p < .0005$. ** $p < .005$, * $p < .06$

Table 11. Correlations and partial correlations of each covariation criteria with the three attributional dimensions for positive and negative events for self

	Covariation Criteria					
	Consensus		Distinctiveness		Consistency	
	Corr.	Partial	Corr.	Partial	Corr.	Partial
Positive						
Internal	.47**	.64**	-.32*	-.11	.26*	-.29
Stable	.30*	.48*	-.15	.00	.15	-.23
Global	.11	-.01	-.10	-.05	.13	.12
Negative						
Internal	-.14	-.17	.09	.14	.00	.16
Stable	.08	.02	-.02	.13	.17	.24
Global	.18	.05	-.13	-.13	.37*	.43*

Note. Corr = correlation; Partial = partial correlation. *** $p < .0005$. ** $p < .005$, * $p < .06$

Table 12. Correlations and partial correlations of each covariation criteria with the three attributional dimensions for positive and negative events for typical student

	Covariation Criteria					
	Consensus		Distinctiveness		Consistency	
	Corr.	Partial	Corr.	Partial	Corr.	Partial
Positive						
Internal	.09	.02	-.02	.04	.13	.13
Stable	.09	.16	.00	.10	.07	.00
Global	.15	-.05	-.08	-.01	.23	.26
Negative						
Internal	-.34*	-.40*	.18	-.01	-.18	.08
Stable	.01	-.18	.03	.11	.21	.39*
Global	.01	-.42*	-.20	-.22	.29	.46*

Note. Corr = correlation; Partial = partial correlation. *** $p < .0005$, ** $p < .005$, * $p < .06$

The analysis for self for positive events revealed that consensus accounted for most of the variance for internality and stability when controlling for distinctiveness and consistency. This pattern is inconsistent with attribution theory. That is, the higher the perceptions of consensus the higher the internality and stability ratings. For negative events, both simple and partial correlations revealed that the higher the perceptions of consistency the higher the globality ratings.

The analysis for typical student revealed no significant simple or partial correlations between perceptions of covariation and attributional dimensions for positive events. For negative events, perceptions of consensus,

controlling for distinctiveness and consistency, were significantly and negatively related internality and globality, as predicted by attribution theory.

In general, the pattern of relations between perceptions of covariation and attributional dimensions differed substantially for different targets of evaluation and for event type. However, since the sample size for each analysis did not exceed forty-five, it is possible that some of these correlations failed to reach significance because of lack of power. Thus, I next examined the pattern of partial correlations and correlations which were moderate (.30 and above) in size but which did not reach significance, as well as those which did reach significance.

There were more relations between distinctiveness and internality which were consistent with attribution theory than between consensus and internality. That is, when the effects of consensus and consistency were partialled out, three of the eight correlations between distinctiveness and internality were moderate in size and consistent with attribution theory. On the other hand, when controlling for distinctiveness and consistency, two of the eight correlations between consensus and internality were moderate and consistent with attribution theory, but two were inconsistent. Furthermore, when controlling for consensus and distinctiveness, three of the eight correlations between consistency and stability were moderate and consistent with attribution theory, but three were inconsistent.

When the relations between each covariation criteria with the relevant attributional dimension were examined ignoring the other two criteria, a slightly different pattern was obtained. Four moderate correlations between consistency and stability which were consistent with attribution theory were obtained, while no inconsistent ones were obtained. In addition, two moderate size correlations between distinctiveness and internality which were consistent with attribution theory were obtained while no inconsistent correlations were obtained. However, four moderate size correlations between consensus and internality which were in the opposite direction from attribution theory predictions were found, while only one significant correlation consistent with attribution theory was found. Thus, when the two other covariation criteria were ignored, the predicted relations between consensus and internality were not obtained. In addition, one-fourth of the predicted relations between distinctiveness and internality were obtained, and one-half of the predicted relations between consistency and stability were obtained.

In summary, the pattern of relations between covariation criteria and attributional dimensions varied for different types of targets of evaluation, event types, and to the extent that the other two criteria were ignored or controlled for. About one-half of the relevant correlations were near-zero or in the opposite direction from predictions from attribution theory. This, rather complex and weak pattern of relations between covariation criteria

and ratings of attributional dimensions suggests that consensus, distinctiveness, and consistency had a limited ability to predict ratings in attributional dimensions in the present study. Would a stronger pattern of relations be obtained between the attributional bias scores and the covariation bias scores?

To examine this possibility, a series of regression analyses were conducted using the attributional bias score as the dependent measure, and the covariation bias scores for consensus, distinctiveness, and consistency as predictors. Separate analyses were conducted for each target of evaluation. Table 13 presents these results of these analyses.

The analysis for parent did not reach significance, ($F < 1$). That is, the three covariation bias scores as a group did not do a good job at explaining the variability in attributional bias when the target of evaluation was parent. The analysis for roommate, however, did reach significance, $F(3, 41) = 3.54$, $p < .02$. This analysis indicated that 20% of the variance in the attributional bias score was accounted for by the three covariation bias scores. As Table 13 indicates, when consensus and consistency were partialled out, distinctiveness was negatively and significantly related to the attributional bias score. The analysis for self approached significance, $F(3, 41) = 2.39$, $p < .08$. As Table 13 indicates, the consistency bias score

Table 13. Regression analyses for each target of evaluation

Variable	Beta	Standard Error	t
Parent			
Con-bias	.07 (.10)	.14	.52
Dy-bias	.05 (.08)	.12	.45
Cy-bias	.17 (.21)	.17	.98
$R^2 = .05$			
Roommate			
Con-bias	-.21 (-.27)	.13	-1.54
Dy-bias	-.27 (.48)	.11	-2.33*
Cy-bias	.05 (.07)	.16	.35
$R^2 = .20$			
Self			
Con-bias	-.01 (-.01)	.12	-.07
Dy-bias	.14 (.33)	.11	1.25
Cy-bias	.30 (.60)	.12	2.43*
$R^2 = .14$			

Table 13-- continued.

Variable	Beta	Standard Error	t
			Typical Student
Con-bias	-.09 (-.10)	.19	-.46
Dy-bias	-.16 (-.21)	.12	-1.28
Cy-bias	.29 (.30)	.21	1.36
$R^2 = .13$			

Note. Con = consensus; Dep = depression; Dy = distinctiveness; Cy = consistency. Values in parentheses are standardized regression coefficients.
* $p < .05$.

was positively and significantly related to the attributional bias score. The analysis for the typical student did not reach significance, $F(3, 39) = 1.98$, $p < .13$.

Once again, the pattern of relations between covariation and attributions varied with different targets of evaluation. It appears that with a larger sample size the analysis for self and typical student might have reached significance. The three covariation bias scores as a group accounted for a small portion of the variability in the attributional bias score. Consensus, however, continued to exhibit the weakest relation to ratings of attributional dimension.

Note

¹The results of the repeated measures ANOVA are reported here instead of separate univariate analysis for each of the ten dimensions in order to control for the number of tests being conducted.

DISCUSSION

At the core of the strong version of the cognitive models of depression is the proposition that an individual who believes the causes of that negative events, but not positive events, will last a long time, will affect everything he/she does, and are his/her fault, is at risk for depression. A weaker version of the cognitive models asserts that nondepressives exhibit more optimistic biases than depressives, not necessarily that depressives are unreasonably pessimistic. Were depressives more pessimistic than nondepressives in the present study?

The current findings supported the weak version of the cognitive models. That is, consistent with the weak version of cognitive theories of depression, nondepressives were more optimistic about the present and the future than depressives. In particular, nondepressives believed to a greater extent than depressives that positive events are more likely to occur to people than negative events, that negative events are more unusual than positive events, and that positive events have occurred with more frequency in the past than negative events. Nondepressives were also more likely than depressives to believe that positive events will reoccur in the future. Depressives, however, were not more likely than nondepressives to take responsibility for negative outcomes. Depressives did not manifest a greater

tendency than nondepressives to generate internal, stable, and global attributions for negative events. Thus, depressives were also just as likely as nondepressives to exhibit a positive attributional bias.

Thus, depressive subjects in the present study appeared to be less optimistic than nondepressives, not more pessimistic. For example, depressives were still likely to believe that positive events occur to others with more frequency than negative events, that negative events are less common than positive events, and that positive events have occurred in the past with more frequency than negative events. These beliefs, however, were more pronounced among nondepressives.

Overall, the current findings are consistent with a weak version of the cognitive theories. In addition, the findings are consistent with research which has failed to find self-deprecating attributional biases among depressives (e.g. Hammen et al., 1981; Hammen et al., 1982; Zuroff, 1981), and with other work that has found self-serving biases among subjects with low self-esteem even when judgments are made publicly (Schlenker, Weigold & Hallam, 1990). This last finding is relevant given that research has found that depression and self-esteem are negatively correlated (Tennen & Herzberger, 1987).

Furthermore, the optimistic biases displayed by subjects in the present study are consistent with substantial research evidence indicating that human thought is characterized by illusions of control, overly positive self

evaluations, and unrealistic optimism. In previous research, for example, subjects have judged positive traits to be more characteristic of self than negative traits (Brown, 1986), perceived their weaknesses as common but perceived their skills as distinctive (Campbell, 1986), taken more responsibility for successes than failures (Weary-Bradley, 1978), deemphasized the importance of abilities they are not good at (Campbell, 1986), believed that they have control over tasks whose outcomes are actually determined by chance (Langer, 1975), believed that more positive events will occur to them in the future than to others but negative events are more likely to occur to others (Weinstein, 1980), and believed that the attributes they possess will cause desirable outcomes and that negative attributes which cause negative outcomes in others will not cause negative outcomes for them (Kunda, 1987). Furthermore, self-serving attributional biases have been found even when subjects have the motivation to create an accurate impression on others (Schlenker et al. 1990).

Taylor and Brown (1988) have argued that these optimistic biases are associated with psychological well being. They review work which indicates that positive illusions are related to more effective performance, higher motivation, success, positive mood, and improved social functioning.

Why are subjects so optimistic? How do they maintain such optimism? Kunda (1987) has offered two sources of these optimistic judgment biases: self-serving generation and evaluation of causal theories. The first

mechanism allows people to generate easily theories linking personal attributes to any outcome. That is, people are able to use stored world and personal knowledge to generate self-serving theories about the causes of positive and negative outcomes. The second mechanism allows people to apply selectively different inferential rules to evaluate information which has implications for the self. That is, people are able to apply more stringent criteria to information with negative implications, but switch to more liberal standards when evaluating information with more favorable implications. Because, according to Kunda, people have the motivation to see themselves as experiencing positive outcomes, they construct theories in which attributes they possess would lead to positive outcomes, and discount information indicating otherwise.

There are a number of motivational and nonmotivational possible explanations for why depressives exhibited less optimism than nondepressives. First, depressives' life experiences may be less positive than the life experiences of nondepressives, making them less optimistic. Second, depressives may be less motivated than nondepressives to feel good and maintain self esteem. Third, depressives may be motivated to avoid further losses in self esteem, disapproval, or further performance demands. Hill, Weary, and Williams (1986) have argued that depressive symptoms may actually reflect the operation of self-protective impression management styles. These self-protective styles are characterized by caution, modesty,

and actions aimed at reducing expectations regarding future performance, and may be situation specific or chronic (Arkin, 1981). Hill et al. (1986) proposed that because of depressive's greater self-doubts and lack of confidence, they adopt this self-protective style. That is, by exhibiting attributional-evenhandedness, depressives avoid any further losses in self-esteem that could result from public challenges of the self-enhancing attributions they might offer.

Thus, a variety of different motives have been discussed in the psychology literature as mediators of judgment biases. The current results do not provide evidence about which of the proposed motives might account for the observed differences. It is clear, nevertheless, that optimistic tendencies are so pervasive and strong that they are exhibited, at least to some degree, even by mild depressives. Thus, no support was found in this study, and indeed, in most of the literature, for the existence of the depressive pessimism, at least among mild depressives.

Self versus Other

The cognitive diathesis theories propose that depressive cognition is guided by schemas or attributional styles which happen to be negative in content. Do these cognitive structures operate when subjects make judgements about others as well as themselves? Do depressives extend their lack of strong optimism to others? If they do, does it matter who the other

is? As discussed below, previous research addressing these issues has yielded mixed results.

In the present study both depressives and nondepressives made more optimistic estimates of consensus, distinctiveness, and consistency for parent than self or other, and least optimistic estimates for the typical student. Thus, depressives and nondepressives exhibited an other-enhancing bias when target was parent, and a self-enhancing bias when the target was typical student.

The results of the attributional measure revealed a different pattern. Depressives exhibited a tendency to evaluate both close others and strangers in the same manner as they evaluated themselves. That is, the moderate positive attributional bias displayed by depressives was extended equally to parent, roommate, and typical student. This was not the case, however, among nondepressives. The larger positive attributional bias displayed by nondepressives was extended to typical student but not to parent or roommate.

Thus, in the present study, depressives did not display a self-enhancing or other enhancing attributional bias; their attributions about others did not differ from those about themselves. This finding is partially consistent with previous research. For example, Crocker et al. (1987) found that depressives were evenhanded when predicting future outcomes for self, and also extended this evenhandedness when predicting outcomes for the typical

college student. That is, depressives evaluated strangers in the same manner in which depressives evaluated themselves. Nondepressives, on the other hand, exhibited a self-enhancing bias, predicting more positive outcomes for self than others. In the present study, on the other hand, nondepressives extended their attributional bias to the typical student, but not to parent or roommate.

The present findings are inconsistent with research by Sweeney, Shaeffer, and Golin (1982) who found that depressives were more attributionally evenhanded about themselves than nondepressives, but both depressives and nondepressives were optimistically biased when evaluating strangers. Also, other work has found that subjects evaluate close others more positively than strangers. For example, Brown (1986) asked high and low self-esteem subjects to rate the extent to which a series of positive and negative traits were descriptive of self, other people, and a close friend. His results showed that both high and low self-esteem subjects evaluated their friends more positively than other people, and evaluated themselves more positively than they evaluated their close friend. Furthermore, this tendency was more pronounced among subjects with high self esteem.

Thus, the literature has not been consistent with regards to whether depressives and nondepressives exhibit a self-serving bias, exhibit an other-enhancing bias, or whether they evaluate themselves as they evaluate others. One potential reason for this inconsistency is the fact that the

various studies have used different designs. Alloy and Abramson (1988) argued that, with some exceptions, in studies employing a between-subjects design, nondepressives typically display a self-enhancing bias while depressives display an other-enhancing bias when making attributional and contingency judgments. However, in studies employing a within-subjects design nondepressives continue to display a self-enhancing bias while depressives are evenhanded.

Alloy et al. (1988) argued that in within-subjects designs there is an explicit social comparison, as subjects evaluate both self and other. This, in their view, reduces ambiguity and weakens any depressive other-enhancing tendencies. However, one could also argue that to the extent that depressives possess a negative self-concept, the explicit social comparisons in the within-subjects experiments should actually result in other-enhancing biases among depressives. Thus, Alloy et al. (1988) analysis might not account for the inconsistent findings in the literature. At present it is not clear why the literature is inconsistent with regards to depressive's other-enhancing bias.

The current findings are consistent with studies that have found that depressives evaluate others as they evaluate themselves. However, the current findings are inconsistent with other research in two ways. First, nondepressives displayed a self-enhancing attributional bias but only when the target was a close other. When the target of evaluation was the typical

college student, the attributions of nondepressives were as optimistic as when the target of evaluation was the self. In the studies cited by Alloy et al. (1988), indicating self-enhancing biases among nondepressives, the targets of evaluation have been the typical student or strangers. Furthermore, in the study conducted by Brown (1986) friends were evaluated more positively than strangers. Second, the current study used a between-subjects design yet depressives did not exhibit an other-enhancing bias.

Why did depressives and nondepressives differ in their attributions of close other? That is, why did depressives extend their positive attributional bias to parent and roommate while nondepressives did not? One potential reason is that depressives may have relied on different causal cues than nondepressives. In other words, depressives may have made different estimates of covariation regarding close others, and/or weighted that information differently than nondepressives. However, in the current study there was no evidence that depressives and nondepressives differed in their judgments of the usefulness of covariation information. In addition, both depressives and nondepressives gave equally optimistic judgments of consensus and distinctiveness for parent. Thus, differences in attributions for close others between depressives and nondepressives appear not to be related to differences in estimates of covariation.

Another potential reason may be that the relationship quality between self and close others differs for depressives and nondepressives. However, depressives and nondepressives did not differ in their ratings of the overall quality of their relations with parent or roommate. Depressives, however, gave lower intimacy and liking ratings for parent and roommate than nondepressives, yet their attributions for these targets were as optimistic as when the target was oneself. In addition, only two dimensions of the RQQ were related to attributional and expectations biases, but different patterns were obtained for different targets of evaluation. The more subjects felt connected to parent the more the subject expected that positive outcomes would occur in the future, and the more responsibility for positive events was assigned to him/her. Also, the more subjects cared about the parent the more positive their expectations bias but not their attributional bias. Because depressives and nondepressives did not differ in ratings of connectedness and caring, these relationship quality dimensions appear not to have mediated differences between depressives and nondepressives in attributions for close other. This finding of the failure of nondepressives to extend the positive attributional bias to close others is in need of replication.

The Use of Causal Cues

Additional goals of the present study were to measure the relation between perceptions of covariation and attributional style, and to examine potential differences between depressives and nondepressives in their

perceptions of the usefulness of this covariation information. No differences were found between depressives' and nondepressives' ratings of the usefulness of covariation. In general, subjects judged covariation information to be most useful when the target was the typical student. However, the pattern of partial correlations between estimates of covariation and attributions when the target of evaluation was the typical student did not reveal more significant correlations than the analyses for other targets of evaluation.

Limited support was found in the current study for the predictions made by attribution theory. About one-half of the correlations between covariation and attributions were near zero or in the opposite direction from attribution theory predictions. The pattern of correlations and partial correlations between covariation and ratings of attributional dimensions varied with target of evaluation and event type. Overall, consistency appeared to have the strongest relation with ratings of attributional dimensions. When ignoring consensus and distinctiveness, about one-half of the correlations between consistency and stability were either significant or moderate in size. Consensus, however, exhibited a pattern of relations with internality that was inconsistent with attribution theory. When ignoring distinctiveness and consistency, about one-half of the correlations between consensus and internality were in the opposite direction from attribution theory predictions. That is, the higher the perceptions of consensus, the higher the internality

ratings. Distinctiveness exhibited a pattern of relations with internality that was consistent with attribution theory. The more unusual the event was perceived to be, the lower the internality ratings. However, less than one-half of the correlations between distinctiveness and internality were either significant or moderate in size.:

The present findings are inconsistent with previous attribution research which has found that subjects generally respond to the three covariation criteria in the manner predicted by attribution models (e.g., Forsterling, 1989; Hewstone & Jaspars, 1987; McArthur, 1972; McGill, 1989; Orvis, Cunningham & Kelley, 1975). However, in previous research the experimenter typically manipulates the covariation criteria and subjects are told explicitly to generate an explanation on the basis of the presented covariation criteria. In the present study, on the other hand, subjects themselves made estimates of the covariation criteria and no explicit instructions were provided to generate an explanation on the basis of these estimates. It may be that unless subjects are told explicitly to make use of covariation information, they will ignore this information and/or use alternative sources of information. Thus, previous attribution research has shown that people can reason according to attribution principles. It seems clear, nevertheless, that people don't necessarily always do so.

The present findings are partially consistent with Crocker et al. (1987), who found that when the target was the self, consensus was not related to

attributional style for negative events but that consistency and consensus were related to attributional style for positive events. As in the present study, both Crocker et al. (1987), and Brewin and Furnham (1986) found that consistency for negative events was positively correlated to stability and globality when the target was oneself.

Methodological differences between the present study and Crocker's and Brewin's studies may account for the slightly different findings. In the present study subjects made estimates of consensus, distinctiveness, and consistency for each event. Subsequently, they provided an explanation for the event and rated that explanation along the three attributional dimensions. In the Crocker study, subjects made estimates for consensus and consistency for a series of negative events which were not the ones they subsequently explained. In addition, in the Brewin study, the consensus question was framed in the following manner: "Would you say that an event like this one is more likely to happen to you than to most people you know, or vice versa?" In the present study, the consensus question was framed in the following manner: "How often has an event like this one happened to others like you?" Even though both questions are clear measures of consensus, the introduction of an explicit standard of comparison with oneself in the Brewin question may have made consensus information appear more relevant when generating the explanation. Indeed, there is

evidence that manipulations of the manner in which consensus information is presented affects the likelihood of its use (Kassin, 1979).

Future research could use more direct measures of how subjects use covariation information when explaining events which occur to others could be made by allowing subjects to select any information they consider relevant before they generate an explanation. Further research could also examine whether the pattern of information search differs when explaining hypothetical versus real events. In addition, in the present study estimates of covariation accounted for a small to moderate percentage of the variance in the attributional bias. Future research could examine what other information, aside from covariation, subjects might use when explaining positive and negative events. It may be that the attributional style is belief-based as opposed to information-based. That is, people may exhibit consistency in the types of explanations they generate because they rely on the same generalized beliefs about the world and the self, as opposed to relying on the same type of situational information. Thus, the self-concept may have a stronger relation to the attributional style than situational information has to the attributional style.

CONCLUSIONS

The cognitive models of depression have received intense attention in the psychological literature. This high degree of attention has generated substantial controversy over the adequacy of these models to explain the causes of depression. After more than a decade of research about variables that might function as antecedents of depression, some researchers have concluded that there is simply no evidence of a cognitive vulnerability for depression as proposed by the strong version cognitive models (Barnett & Gotlib, 1988; Haaga, Dyck, & Ernst, 1991). Indeed, the hopelessness theory of depression has been revised several times in order to account for an embarrassingly inconsistent pattern of support over the years. The first revision was made by Abramson et al. (1978). Subsequently, Abramson et al. (1988) offered a reformulation. Recently, Alloy et al. (1992) have offered further clarification of the appropriate way of testing the hopelessness theory. Should we be optimistic or pessimistic about the fate of the strong version of the cognitive models?

The findings in the present study suggest that we should side with the pessimists. I examined differences between depressives and nondepressives in attributional bias, in expectations about the future, and in biases in their perceptions of consensus, distinctiveness, and consistency for positive and

negative events. No evidence was found in the present study of depressive pessimism. That is, depressed subjects were optimistically biased in all of the analyses conducted, although this optimism was not as strong as that of nondepressives. Perhaps it is possible that only clinically depressed subjects would manifest true pessimism. However, recent reviews have indicated that the nature of the sample (mildly depressed college students versus clinically depressed patients) did not distinguished between studies which have found a relation between depression and attributions versus studies which have not (Peterson, Villanova, & Raps, 1985; Sweeney, Anderson, & Bailey, 1986).

Support for the cognitive theories comes from research that has found that depressives take more responsibility for negative events than nondepressives. However, this finding does not necessarily indicate that depressives are pessimistic. Indeed, in these studies depressives exhibit either evenhandedness, or take more responsibility for positive than negative events (e.g., Alloy & Ahrens, 1987). Other supportive research constitutes findings that subjects who possess an internal, stable, and global attributional style tend to remain sad for a longer period of time following receipt of a bad test grade than subjects who do not possess such a style. This finding, however, only reveals that one's attributional style is related to brief fluctuations in sad affect. Research has yet to measure the relation

between attributional style and clinically significant depressive symptoms following negative events.

The appeal of the cognitive models is related to the demonstrated efficacy of cognitive therapy to reduce depressive symptoms and prevent subsequent relapse (Evans & Hollon, 1988). Thus, it could be argued that if a therapeutic approach that is based on propositions from cognitive models is effective then we should be able to conclude that the cognitive models are correct. The difficulty with this assertion lies in the fact that researchers don't know why cognitive therapy works. Evans and Hollon (1988) have suggested that cognitive therapy might work by correcting depressives' distortions, or by teaching depressives to be unrealistically optimistic. No conclusive evidence exists about which mechanism is responsible for the success of cognitive therapy.

The current findings suggest that cognitive therapy might work by building on the relatively weak optimistic biases which depressives do possess. Indeed, the social psychological literature has demonstrated the pervasiveness of optimistic biases and illusions among humans. It may still be possible, however, to find a subset of individuals who, while nondepressed, are fundamentally pessimistic. This is the challenge for the cognitive theories of depression as currently formulated. Thus far research has not been encouraging.

I believe that a more promising program of research would be one that examines how optimistic biases may function as a buffer against depression following negative events. Indeed, it is the absence of strong optimism which appears to distinguish nondepressives from depressives. There may well be a cognitive vulnerability for depression. However, this vulnerability is unlikely to be pessimism.

Other research, for example, has focused on alternative types of cognitive vulnerabilities for depression. Linville (1987) proposed that the more complex the cognitive representation of the self is, the more moderate the affective reactions to stressful events would be. That is, subjects whose self-concepts are highly multifaceted, who think of themselves in terms of a variety of different social roles as opposed to only a few number of roles, and who maintain distinctions between these roles, will be less extreme in their affective reactions. The less differentiated the various aspect of the self are, the more likely it is that feelings and thoughts associated with one will spill over the other.

Linville (1987) has offered some support for her contentions. She found that subjects who are high in self-complexity were less prone to depression following stressful events than subjects low in self-complexity. Note, however, that there are similarities between Linville's self-complexity approach and Seligman's attributional approach. From Linville's perspective, one protects oneself against depression by not allowing the failures in one

domain in one's life to color one's perceptions of the other domains. In Seligman's approach, this is the equivalent of generating specific as opposed to global attributions for negative events. Indeed, an individual who allows the affective and cognitive reactions to failure in one domain to affect other domains in his/her life will probably be at risk for depression. However, the cognitive vulnerability need not be pessimism or a depressonogenic attributional style. Clearly, the nature of this cognitive vulnerability should be the focus of further research.

The literature has examined how depressives and nondepressives evaluate strangers. In the present study I also examined how they evaluate close others. No evidence was found of other-enhancing biases among depressives. However, in the present study, as well as in the depression literature, the judgments were made privately. Future studies could introduce self-presentational goals by making judgments public or allowing one's close other to see one's judgements of him/her. This manipulation could allow us to examine under what circumstances, if any, would depressives exhibit either self-enhancing or other-enhancing biases as an indirect attempt at self-presentation.

APPENDIX A

CES-DC

Below is a list of the ways you might have felt or behaved recently. Indicate how often you have felt this way during the past week. Use the following scale when responding to the questions:

1	2	3	4
Rarely or none of the time (Less than 1 day)	Some or a Little of the day (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or All of the time (5-7 days)

1. I was bothered by things that don't usually bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake the blues even with help from my family or friends.
4. I felt that I was just as good as other people.
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort.
8. I felt hopeful about the future.
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.
19. I felt that people dislike me.
20. I could not get "going".

APPENDIX B

HYPOTHETICAL EVENTS OF THE ASQ

1. You meet a friend who compliments you in your appearance.
2. You have been looking for a job unsuccessfully for some time.
3. You become very rich.
4. A friend comes to you with a problem and you don't try to help.
5. You give an important talk in front of a group and the audience reacts negatively.
6. You do project that is highly praise.
7. You meet a friend who acts hostilely towards you.
8. You cant' get all the work done that others expect of you.
9. Your spouse [or boyfriend/girlfriend] has been treating you more lovingly.
10. You apply for a position that you want very badly and you get it.
11. You go out on a date and it goes badly.
12. You get a raise.

APPENDIX C

RELATIONSHIP QUESTIONNAIRE

We are interested in the factors that determine various aspects of relationships. Therefore, we would like you to answer the questions below regarding the person you have been asked to think about.

1. What is your [roommate][parent]'s name (first name only) _____.
2. How long have you known your [roommate][parent]? (Indicate the number of years and months) _____ years, _____ months.
3. During the past week, what is the average amount of time, per day, that you have spent alone with your [roommate][parent]?

_____ Hour(s) _____ Minutes

4. Do you and your [roommate][parent] participate in many different activities together, or do you participate in only a few activities together.

1-----2-----3-----4-----5-----6-----7

Only a Few
Activities

Many Different
Activities

5. How much influence does your [roommate][parent] currently have on your thoughts, feelings, and behavior?

1-----2-----3-----4-----5-----6-----7

Not Much
Influence

Moderate
Influence

A Great Deal
of Influence

6. How strong would you rate your relationship with your [roommate][parent]?

1-----2-----3-----4-----5-----6-----7

Not at all
Strong

Moderately
Strong

Very
Strong

7. How close does your relationship with your [roommate][parent] compare with your ideal for such a friendship?

1-----2-----3-----4-----5-----6-----7-----8-----9

Falls far
short of ideal

Approaches
ideal

Meets
ideal

Please respond to the following items on the scale given below. Please indicate your answer in the space provided to the left of the item. Again, complete these items imagining the person you listed above.

1-----2-----3-----4-----5-----6-----7-----8-----9

Not True

Definitely
True

1. _____ My [roommate][parent] is like an extension of myself.
2. _____ To say something bad about my [roommate][parent] is also to say it about me.
3. _____ My [roommate][parent] and I are like two sides of the same coin.
4. _____ I think of my [roommate][parent] as part of myself.
5. _____ To say something good about my [roommate][parent] is also to say it about me.
6. _____ My [roommate][parent] and I are like "two peas in a pod."
7. _____ To judge my [roommate][parent] is also to judge me.
8. _____ My [roommate][parent] and I have a great deal in common.
9. _____ My [roommate][parent] and I are similar in most respects.
10. _____ My [roommate][parent]'s needs are about as important to me as my own.
11. _____ I would do nearly anything to help my [roommate][parent].
12. _____ If my [roommate][parent] were in trouble, I would help at once no matter what the cost.
13. _____ My [roommate][parent]'s welfare is one of my major concerns.
14. _____ My [roommate][parent]'s feelings are as important to me as my own.
15. _____ I truly care about my [roommate][parent]'s well-being.
16. _____ Other people judge me based in part on what my [roommate][parent] does.
17. _____ If my [roommate][parent] does something wrong, it reflects negatively on me in the eyes of other people.

18. ____ When other people think about my [roommate][parent], they also think about me.
19. ____ If my [roommate][parent] does something good, it reflects positively on me in the eyes of other people.
20. ____ I usually try to put myself in my [roommate][parent]'s shoes and see things from my [roommate][parent]'s perspective.
21. ____ When my [roommate][parent] and I disagree, I usually realize there are two sides to every question and try to see things from my [roommate][parent]'s point of view.
22. ____ I find it easy to predict what my [roommate][parent] will do in most situations.
23. ____ I can usually imagine exactly what my [roommate][parent] is feeling or thinking.
24. ____ When my [roommate][parent] feels happy, I feel happy, too.
25. ____ When my [roommate][parent] feels sad, I feel sad, too.
26. ____ When my [roommate][parent] fails, I feel terrible inside.
27. ____ My [roommate][parent]'s moods influence my own moods.
28. ____ If my [roommate][parent] is hurt, it hurts me, too.
29. ____ When my [roommate][parent] succeeds, I feel marvelous inside.
30. ____ My [roommate][parent] and I often compete and try to outdo one another.
31. ____ When we play games, I hate to lose to my [roommate][parent].
32. ____ I can't stand it if my [roommate][parent] gets the better of me.
33. ____ When my [roommate][parent] does poorly, it makes me feel superior.
34. ____ When my [roommate][parent] does well, it makes me feel inferior.
35. ____ When my [roommate][parent] does poorly, I try to come up with an explanation that makes my [roommate][parent] feel better.
36. ____ When my [roommate][parent] performs well, I try to make sure that my [roommate][parent] gets personal credit.
37. ____ I try to emphasize my [roommate][parent]'s good points and downplay my [roommate][parent]'s bad points.
38. ____ I try to bring out the best in my [roommate][parent] through encouragement and support.
39. ____ I give considerable emotional support to my [roommate][parent].
40. ____ My [roommate][parent] is able to count on me in times of need.
41. ____ I can confide in my [roommate][parent] about anything.
42. ____ I have a warm and comfortable relationship with my [roommate][parent].
43. ____ My relationship with my [roommate][parent] is based on mutual understanding.
44. ____ I feel emotionally close to my [roommate][parent].
45. ____ I can "let my hair down" with my [roommate][parent] and just be myself.

46. ____ I trust my [roommate][parent] completely.
47. ____ I have a strong commitment to my relationship with my [roommate][parent].
48. ____ I will stick by my [roommate][parent] through the most difficult times.
49. ____ My commitment to my [roommate][parent] is a matter of principle.
50. ____ I can't imagine ending my relationship with my [roommate][parent].
51. ____ I expect my relationship with my [roommate][parent] to last the rest of my life.
52. ____ I am committed to maintaining my relationship with my [roommate][parent].
53. ____ When I am with my [roommate][parent], we are almost always in the same mood.
54. ____ I think that my [roommate][parent] is unusually well-adjusted.
55. ____ I would highly recommend my [roommate][parent] for a responsible job.
56. ____ In my opinion, my [roommate][parent] is an exceptionally mature person.
57. ____ I have great confidence in my [roommate][parent]'s good judgment.
58. ____ Most people would react very favorably to my [roommate][parent] after a brief acquaintance.
59. ____ I think that my [roommate][parent] and I are quite similar to each other.
60. ____ I would vote for my [roommate][parent] in a class or group election.
61. ____ I think that my [roommate][parent] is one of those people who quickly wins respect.
62. ____ I feel that my [roommate][parent] is an extremely intelligent person.
63. ____ My [roommate][parent] is one of the most likable people I know.
64. ____ My [roommate][parent] is the sort of person whom I myself would like to be.
65. ____ It seems to me that it is very easy for my [roommate][parent] to gain admiration.
66. ____ If my [roommate][parent] were feeling badly, my first duty would be to cheer him (her) up.
67. ____ I feel that I can confide in my [roommate][parent] about virtually everything.
68. ____ I find it easy to ignore my [roommate][parent]'s faults.
69. ____ I would do almost anything for my [roommate][parent].
70. ____ If I could never be with my [roommate][parent], I would feel miserable.

71. ____ If I were lonely, my first thought would be to seek out my [roommate][parent].
72. ____ One of my primary concerns is my [roommate][parent]'s welfare.
73. ____ I would forgive my [roommate][parent] for practically anything.
74. ____ I feel responsible for my [roommate][parent]'s well being.
75. ____ I would greatly enjoy being confided in by my [roommate][parent].
76. ____ It would be hard for me to get along without my [roommate][parent].
77. ____ I cannot imagine being without my [roommate][parent].

APPENDIX D

ATTRIBUTIONAL STYLE QUESTIONNAIRE

Please try to imagine yourself [the parent you feel closest to][the roommate you feel closest to][the typical college student] in the situations that follow. We want you to answer some questions about each event. If such a situation happened to you [him/her], what would you [he/she] feel have caused it? While events may have many causes, we want you to pick only one- the major cause if this event happened to you [him/her].

EVENT:

- 1) How often has an event like this happened to others like [you] [your parent] [your roommate]?

Totally 1 2 3 4 5 6 7 Extremely
unlikely : likely

- 2) How frequently this event has occurred to [you] [your parent] [your roommate] in the past?

Never 1 2 3 4 5 6 7 Often

- 3) How probable is it that this event will occur again in the future?

Not at 1 2 3 4 5 6 7 Very probable
all probable

- 4) Compared to other events which have occurred in [your life] [the life of your parent][the life of your roommate] how unusual would you consider this event to be for [you] [him/her]?

Not at 1 2 3 4 5 6 7 Very probable
all probable

- 5) Write down one major cause:

- 6) Is this cause due to something about you or something about other people or circumstances?

Totally due to other people or circumstances 1 2 3 4 5 6 7 Totally due to me

- 7) In the future if this event occurs again, will this cause again be present for you?

Will never again be present 1 2 3 4 5 6 7 Will always be present

- 8) Is this cause something that just affects this situation, or does it influence other areas of your life?

Influences just this particular situation 1 2 3 4 5 6 7 Influences all situations in my life

- 9) How important would you this situation be if it happened to you?

Not at all important 1 2 3 4 5 6 7 Extremely important

- 10) How useful was estimating the extent to which this event has occurred to others like you in explaining what caused it?

Not at all 1 2 3 4 5 6 7 Extremely

- 11) How useful was estimating the frequency of occurrence of this event in the past in explaining what caused it?

Not at all 1 2 3 4 5 6 7 Extremely

- 12) How useful was estimating how unusual this event is in comparison to other events in explaining what caused it?

Not at all 1 2 3 4 5 6 7 Extremely

APPENDIX E

ESTIMATES OF OTHERS' SUCCESSES AND FAILURES

For each of the following people indicate if he/she experiences as many successes in life as you do. Leave an item blank if it does not apply.

Father:	Not as many	1	2	3	4	5	6	7	As Many
Mother:	Not as many	1	2	3	4	5	6	7	As many
Sister:	Not as many	1	2	3	4	5	6	7	As many
Brother:	Not as many	1	2	3	4	5	6	7	As many
Roommate:	Not as many	1	2	3	4	5	6	7	As many
Best friend:	Not as many	1	2	3	4	5	6	7	As many

For each of the following people indicate if he/she experiences as many failures in life as you do. Leave an item blank if it does not apply.

Father:	Not as many	1	2	3	4	5	6	7	As Many
Mother:	Not as many	1	2	3	4	5	6	7	As many
Sister:	Not as many	1	2	3	4	5	6	7	As many
Brother:	Not as many	1	2	3	4	5	6	7	As many
Roommate:	Not as many	1	2	3	4	5	6	7	As many
Best friend:	Not as many	1	2	3	4	5	6	7	As many

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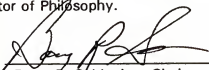
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BIOGRAPHICAL SKETCH

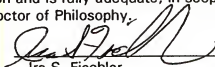
Rodolfo Murphy received a Bachelor of Science degree in psychology from the Ohio State University, and a Masters of Arts degree in psychology from California State University, Los Angeles. He is currently completing the requirements for his Doctor of Philosophy degree.

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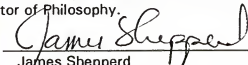
Barry R. Schlenker, Chair
Professor of Psychology

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Ira S. Fischler
Professor of Psychology

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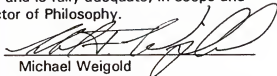
James Shepperd
Assistant Professor of
Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Stephen Kraus
Assistant Professor
Psychology

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Michael Weigold
Assistant Professor of
Journalism and Communications

This dissertation was submitted to the Graduate Faculty of the Department of Psychology in the College of Liberal Arts and Sciences and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August, 1993

Dean, Graduate School